CDX-M620/M670

SERVICE MANUAL

Ver 1.0 2001. 03

US Model
CDX-M620/M670
AEP Model
UK Model
E Model
CDX-M670



• The tuner and CD sections have no adjustments.

Model Name Using Similar Mechanism	CDX-M700R/M750
CD Drive Mechanism Type	MG-383Z-121//K
Optical Pick-up Name	KSS-720A

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS (US MODEL)
POWER OUTPUT AND TOTAL HARMONIC DISTORTION
23.2 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 5% total harmonic distortion.

CD player section

Signal-to-noise ratio	90 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit
Laser Diode Properties (US model)	
Material	GaAlAs
Wavelength	780 nm
Emission Duration	Continuous
Laser output power	Less than 44.6 µW*

* *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.*

Tuner section

FM

Tuning range	87.5 – 107.9 MHz (US model) 87.5 – 108.0 MHz (AEP, UK, E model)
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz/450 kHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	66 dB (stereo), 72 dB (mono)
Harmonic distortion at 1 kHz	0.6% (stereo), 0.3% (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

AM (US model)

Tuning range	530 – 1,710 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz/450 kHz
Sensitivity	30 µV

MW/LW (AEP, UK, E model)

Tuning range	MW: 531 – 1,602 kHz LW: 153 – 279 kHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz/450 kHz
Sensitivity	MW: 30 µV LW: 40 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	52 W × 4 (at 4 ohms)

General

Outputs	Audio outputs (front/rear) Subwoofer output (mono) Power antenna relay control lead (US model) Power aerial relay control lead (AEP, UK, E model) Power amplifier control lead

– Continued on next page –

FM/AM COMPACT DISC PLAYER
CDX-M620/M670
FM/MW/LW COMPACT DISC PLAYER
CDX-M670

9-873-505-11
2001C0400-1

Sony Corporation
Audio Entertainment Group
General Engineering Dept.

SONY®

Inputs	Telephone ATT control lead Illumination control lead BUS control input connector BUS audio input connector Antenna input connector (US model) Aerial input connector (AEP, UK, E model) AUX IN connector (US model)
Tone controls	Bass ±8 dB at 100 Hz Treble ±8 dB at 10 Hz
Loudness	+8 dB at 100 Hz +2 dB at 10 Hz
Power requirements	12 V DC car battery (negative earth)
Dimensions	Approx. 178 × 50 × 182 mm (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 160 mm (w/h/d)
Mass	Approx. 1.5 kg
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1) Card remote commander RM-X110 (US model) RM-X111 (AEP, UK, E model)

Note
This unit cannot be connected to a digital preamplifier or an equalizer.

Design and specifications are subject to change without notice.

SERVICE NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

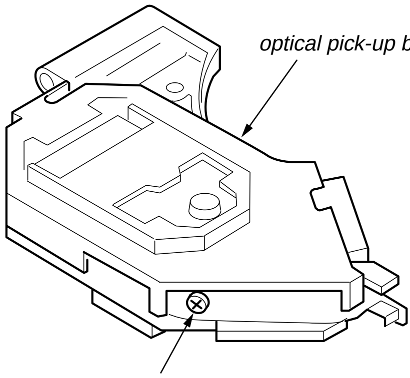
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

US model:

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

If the optical pick-up block is defective, please replace the whole optical pick-up block.
Never turn the semi-fixed resistor located at the side of optical pick-up block.



AEP/UK model:

CLASS 1
LASER PRODUCT

This label is located on the bottom of the chassis.

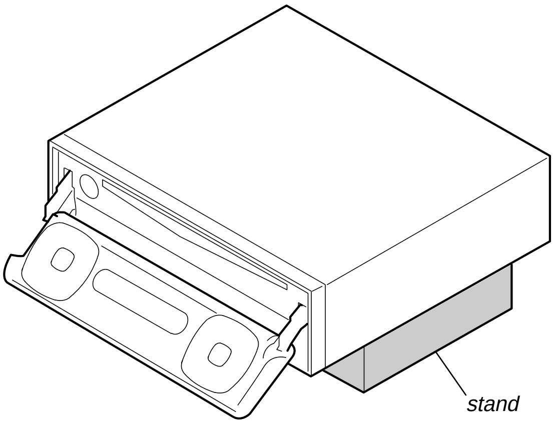
CAUTION—INVISIBLE LASER RADIATION WHEN OPEN
DO NOT STARE INTO BEAM OR
VIEW DIRECTLY WITH OPTICAL INSTRUMENTS

This label is located on the drive unit's internal chassis.

When replacing the chassis (T) of mechanism deck which have the "CAUTION LABEL" attached, please be sure to put a new CAUTION LABEL (3-223-913-11) to the chassis (T).

NOTE FOR THE OPENING OF THE FRONT PANEL

In this set, the front panel is lowered to below the bottom face when it is opened.
When servicing the set, place it on a stand having a height of about 2 cm.



TEST MODE

1. Turn on the power.
2. Push "4" on the card remote control for 2 sec.
3. Push "5" on the control for 2 sec.
4. Push "1" on the control for 2 sec.
   (The TEST MODE is entered.)
5. Push the "OPEN/CLOSE" switch on the control for 2 sec.
6. The front panel detouch position is set.
   (No display appears at this time.)
7. Turn off the power and disassemble the set.

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SECTION 1
GENERAL

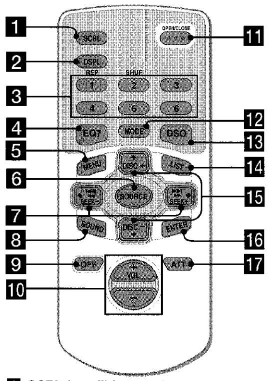
This section is extracted from instruction manual.

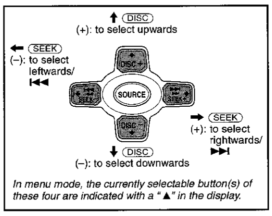
US MODEL

Location of controls

Card remote commander RM-X110

Refer to the pages listed for details.
CD/MD: During Playback **RADIO**: During radio reception **MENU**: During menu mode



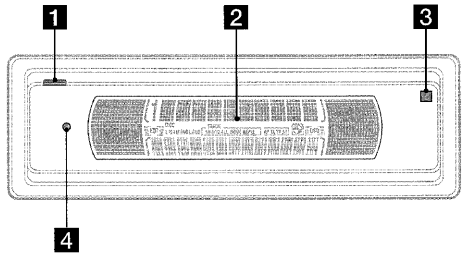


Note
If the unit is turned off by pressing (OFF) for 2 seconds, the unit cannot be operated with the card remote commander unless (SOURCE) on the unit is pressed, or a disc is inserted to activate the unit first.

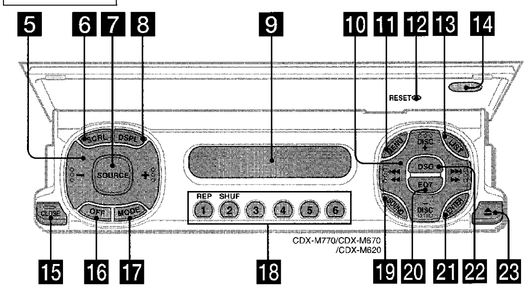
Tip
Refer to "Replacing the lithium battery" for details on how to replace the batteries (page 31).

1 **SCRL (scroll) button** 10
2 **DSPL (display mode change) button** 10, 12, 27
3 **Number buttons**
CD/MD
① **REP** 11
② **SHUF** 11
RADIO 14, 15
TV 28, 29
4 **EQ7 button** 17
5 **MENU button** 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, 25, 26, 27, 28, 30
6 **SOURCE (Power on/Radio/CD/MD) button** 9, 10, 12, 14, 15, 17, 18, 20, 21, 22, 25, 26, 27, 28, 30
7 **←/→ SEEK –/+ buttons** 19, 20, 21, 22
CD/MD 10
RADIO 14, 15
TV 28, 30
MENU 9, 11, 13, 17, 18, 19, 22, 23, 25, 26, 27
8 **SOUND button** 19, 20, 21, 22
9 **OFF (Stop/Power off) button** 10, 27, 30
10 **VOL +/– buttons**
11 **OPEN/CLOSE button** 10, 32
12 **MODE button**
CD/MD 10, 12
RADIO 14, 15
TV 28
13 **DSO button** 18
14 **LIST button**
CD/MD 12
RADIO 16
TV 28, 29
15 **↑/↓ DISC +/– buttons**
CD/MD 10, 12
RADIO 14, 15, 16
TV 30
MENU 9, 11, 12, 13, 14, 16, 17, 18, 19, 21, 22, 23, 25, 26, 27, 28
16 **ENTER button**
CD/MD 12
RADIO 15, 16
MENU 9, 11, 12, 13, 14, 16, 17, 18, 21, 22, 23, 25, 26, 27, 28
TV 22, 30
17 **ATT button** 25

Main display panel



Operation side



The corresponding buttons of the unit control the same functions as those on the card remote commander.

1 **OPEN button** 8, 10, 32
2 **Main display window**
3 14 **Receptor for the card remote commander**
4 12 **Reset button** 8
5 **Volume adjust buttons**
6 **SCRL (scroll) button**
7 **SOURCE button**
8 **DSPL (display mode change) button**
9 **Sub display window**
10 **DISC +/– (cursor up/down) buttons SEEK –/+ (cursor left/right) buttons**
11 **MENU button**
13 **LIST button**
15 **CLOSE (front panel close) button** 8, 10
16 **OFF (Stop/Power off) button***
17 **MODE button**
18 **Number buttons**
19 **SOUND button**
20 **EQ7 button**
21 **ENTER button**
22 **DSO button**
23 **≜ (eject) button** 10, 30

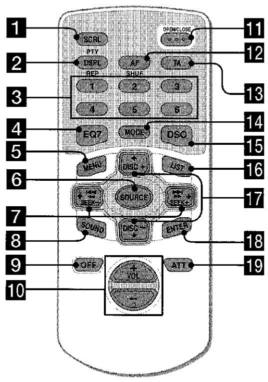
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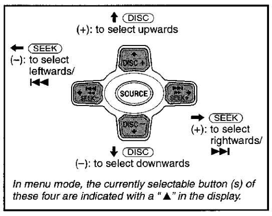
AEP, UK, E MODEL

Location of controls

Card remote commander RM-X111

Refer to the pages listed for details.
CD/MD: During Playback **RADIO**: During radio reception **MENU**: During menu mode



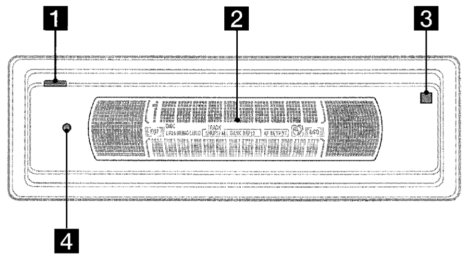


Note
If the unit is turned off by pressing (OFF) for 2 seconds, the unit cannot be operated with the card remote commander unless (SOURCE) on the unit is pressed, or a disc is inserted to activate the unit first.

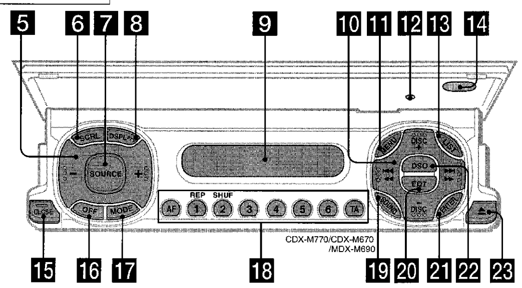
Tip
Refer to "Replacing the lithium battery" for details on how to replace the batteries (page 36).

1 **SCRL (scroll) button** 12
2 **DSPL/PTY (display mode change/ programme type) button** 12, 13, 17, 20, 25, 35
3 **Number buttons**
CD/MD
① **REP** 12
② **SHUF** 12
RADIO 15, 16, 18, 19, 22, 24
4 **EQ7 button** 26
5 **MENU button** 10, 13, 14, 15, 19, 21, 23, 25, 26, 27, 28, 30, 31, 33, 34, 35
6 **SOURCE (Power on/Radio/CD/MD) button** 10, 11, 13, 15, 16, 19, 22, 26, 27, 29, 30, 31, 33, 35
7 **←/→ SEEK +/– buttons** 10, 28, 29, 30, 31
CD/MD 11
RADIO 16, 18, 22
MENU 10, 13, 14, 15, 21, 23, 25, 26, 27, 28, 30, 31, 33, 34, 35
8 **SOUND button** 28, 29, 30, 31
9 **OFF (Stop/Power off) button** 11, 35
10 **VOL +/– buttons** 19
11 **OPEN/CLOSE button** 11, 37
12 **AF button** 18, 19
13 **TA button** 19
14 **MODE button**
CD/MD 11, 13
RADIO 15, 16, 19, 22
15 **DSO button** 27
16 **LIST button**
CD/MD 13, 14
RADIO 17, 24
17 **↑/↓ DISC +/– buttons**
CD/MD 11, 14
RADIO 16, 17, 20, 22, 23, 24, 25
MENU 10, 13, 14, 15, 19, 21, 23, 25, 26, 27, 28, 30, 31, 33, 34, 35
18 **ENTER button**
CD/MD 14
RADIO 17, 20, 23, 24, 25
MENU 10, 13, 14, 15, 19, 21, 23, 25, 26, 27, 30, 31, 33, 34, 35
19 **ATT button** 33

Main display panel



Operation side



The corresponding buttons of the unit control the same functions as those on the card remote commander.

1 **OPEN button** 9, 11, 37
2 **Main display window**
3 14 **Receptor for the card remote commander**
4 12 **Reset button** 9
5 **Volume adjust buttons**
6 **SCRL (scroll) button**
7 **SOURCE button**
8 **DSPL/PTY (display mode change/ programme type) button**
9 **Sub display window**
10 **DISC +/– (cursor up/down) buttons SEEK –/+ (cursor left/right) buttons**
11 **MENU button**
13 **LIST button**
15 **CLOSE (front panel close) button** 9, 11
16 **OFF (Stop/Power off) button***
17 **MODE button**
18 **Number buttons**
19 **SOUND button**
20 **EQ7 button**
21 **ENTER button**
22 **DSO button**
23 **≜ (eject) button** 11

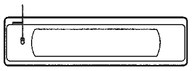
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US, AEP, UK, E MODEL

Getting Started

Resetting the unit

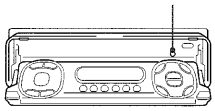
Before operating the unit for the first time, or after replacing the car battery or changing the connections, you must reset the unit.
Press the reset button with a pointed object, such as a ball-point pen.



Notes
- *After resetting the unit in the closed position, be sure to press (OPEN) once before operating further. If a disc is in the unit, the disc will be ejected automatically. Insert the disc again.*
- *Pressing the reset button will erase the clock setting and some stored contents.*

Resetting the unit during use in sub display-position

Reset button by the disc-slot with a pointed object, such as a ball-point pen.



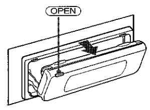
Detaching the main display window

You can detach the main display window of this unit to protect the unit from being stolen.

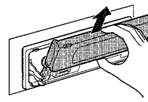
Caution alarm

If you turn the ignition switch to the OFF position without removing the front panel, the caution alarm will beep for a few seconds.

1 Press (OPEN) on the unit for 2 seconds.
CD/MD playback or radio reception stops, and the front panel automatically tilts at an angle of 30°.



2 Detach the main display window as illustrated.
After the main display window detaching is complete, the front panel closes automatical.

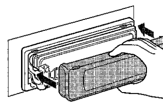


Notes
- *If you detach the main display window while the unit is still turned on, the power will turn off automatically to prevent the speakers from being damaged.*
- *Do not drop or put excessive pressure on the display window.*
- *Do not subject the main display window to heat/high temperature or moisture. Avoid leaving it in parked cars or on dashboards/rear trays.*

Tips
- *If you want to detach the main display window, when the front panel is in the sub-display position, press (CLOSE) for 2 seconds.If a disc is partially inserted, load the disc correcty or remove the disc from the unit.*
- *When carrying the main display window with you, use the supplied front panel case.*

Attaching the main display window panel

Place the main display window on the front side of the unit as illustrated, then lightly push the front panel into position until it clicks.
Press (SOURCE) (or insert a disc) to operate the unit.



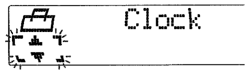
Note
Do not put anything on the inner surface of the main display window.

Setting the clock

The clock uses a 12-hour digital indication.

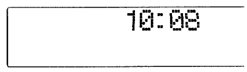
Example: To set the clock to 10:08

1 Press (MENU), then press ↑ or ↓ (the either (+/–) side of (DISC)) repeatedly until "Clock" appears.



❶ Press (ENTER).
The hour indication flashes.
❷ Press ↑ or ↓ to set the hour.
❸ Press → (the (+) side of (SEEK)).
The minute indication flashes.
❹ Press ↑ or ↓ to set the minute.

2 Press (ENTER).



The clock starts. After the clock setting is completed, the display returns to normal play mode.

Tip
When D.Info mode is set to on, the time is always displayed (page 26).

CD Player
CD/MD Unit (optional)

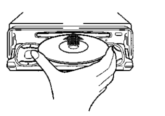
In addition to playing a CD with this unit, you can also control external CD/MD units.

Note
If you connect an optional CD unit with the CD TEXT function, the CD TEXT information will appear in the display when you play a CD TEXT disc.

Playing a disc

(With this unit)

1 Press (OPEN/CLOSE) or (OPEN) on the unit and insert the disc (labeled side up).
Playback starts automatically.



2 Press (OPEN/CLOSE) or (CLOSE) on the unit to close the front panel.

If a disc is already inserted, press (SOURCE) repeatedly until "CD" appears to start playback.

To	Press
Stop playback	(OFF)
Eject the disc	(OPEN/CLOSE), or (OPEN) then ≜
Skip tracks – Automatic Music Sensor	←/→ (SEEK) (⏮/⏭) [once for each track]
Fast-forward/ reverse – Manual Search	←/→ (SEEK) (◀◀/▶▶) [hold to desired point]

Notes
- *When the last track on the disc is over, playback restarts from the first track of the disc.*
- *With optional unit connected, playback of the same source will continue on to the optional CD/MD unit.*

(With optional unit)

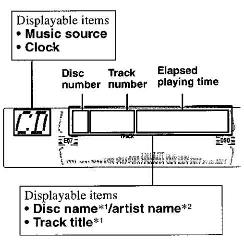
1 Press (SOURCE) repeatedly to select "CD" or "MD."

2 Press (MODE) repeatedly until the desired unit appears.
Playback starts.

To	Press
Skip discs – Disc selection	↑/↓ (DISC) (+/–)

Display items

When the disc/track changes, any prerecorded title*1 of the new disc/track is automatically displayed (if the Auto Scroll function is set to "on," names exceeding 9 characters will be scrolled (page 26)).



To	Press
Switch display item	(DSPL)
Scroll display item	(SCRL)

*1 *When pressing (DSPL), "NO D.Name" or "NO T.Name" indicates that there is no Disc Memo (page 11) or prerecorded name to display.*
*2 *Only for CD TEXT discs with the artist name.*

Notes
- *Some characters cannot be displayed.*
- *For some CD TEXT discs with very many characters, information may not scroll.*
- *This unit cannot display the artist name for each track of a CD TEXT disc.*

Tip
When Auto scroll is set to off, and the disc/track is changed, the disc/track name does not scroll.

Playing tracks repeatedly
— Repeat Play

The disc in the main unit will repeat a track or the entire disc when it reaches the end. For repeat play, you can select:
- Repeat 1 — to repeat a track.
- Repeat 2* — to repeat a disc.

* *Available only when one or more optional CD/MD units are connected.*

During playback, press (1) (REP) repeatedly until the desired setting appears in the display.
Repeat Play starts.

To return to normal play mode, select "Repeat off."

Playing tracks in random order
— Shuffle Play

You can select:
- Shuf 1 — to play the tracks on the current disc in random order.
- Shuf 2*1 — to play the tracks in the current optional CD (MD) unit in random order.
- Shuf All*2 — to play all the tracks in all the connected CD (MD) units (including this unit) in random order.

*1 *Available only when one or more optional CD (MD) units are connected.*
*2 *Available only when one or more optional CD units, or two or more optional MD units are connected.*

During playback, press (2) (SHUF) repeatedly until the desired setting appears in the display.
Shuffle Play starts.

To return to normal play mode, select "Shuf off."

Note
"Shuf All" will not shuffle tracks between CD units and MD units.

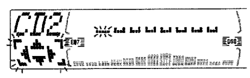
Labeling a CD
— Disc Memo (For a CD unit with the CUSTOM FILE function)

You can label each disc with a custom name (Disc Memo). You can enter up to 8 characters for a disc. If you label a CD, you can locate the disc by name (page 12).

1 Start playing the disc you want to label in a CD unit with the CUSTOM FILE function.

2 Press (MENU), then press ↑ or ↓ repeatedly until "Name Edit" appears.

3 Press (ENTER).



The unit will repeat the disc during the labeling procedure.

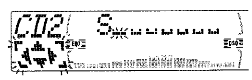
4 Enter the characters.

❶ Press ↑*1 repeatedly to select the desired character.

A → B → C ... → 0 → 1 → 2 ... → + → – → ✻ ... → ␣ *2 → A

*1 *For reverse order, press ↓.*
*2 *(blank space)*

❷ Press → after locating the desired character.



If you press ← (the (–) side of (SEEK)), you can move back to the left.

❸ Repeat steps ❶ and ❷ to enter the entire name.

5 To return to normal CD play mode, press (ENTER).

continue to next page →

Tips
- *Simply overwrite or enter " ␣ " to correct or erase a name.*
- *There is another way to start labeling a CD: Press (LIST) for 2 seconds instead of performing steps 2 and 3. You can also complete the operation by pressing (LIST) for 2 seconds instead of step 5.*
- *You can label CDs on a unit without the CUSTOM FILE function if that unit is connected along with a CD unit that has the function. The Disc Memo will be stored in the memory of the CD unit with the CUSTOM FILE function.*

Note
Repeat/shuffle play is suspended until the Name Edit is complete.

Viewing the Disc Memo
As a display item, the Disc Memo always takes priority over any original CD TEXT information.

To	Press
View	(DSPL) during CD/CD TEXT disc playback

Tip
To find out about other items that can be displayed, see page 10.

Erasing the Disc Memo
1. **Press (SOURCE) repeatedly to select "CD."**
2. **Press (MODE) repeatedly to select the CD unit storing the Disc Memo.**
3. **Press (MENU), then press ↑ or ↓ repeatedly until "Name Del" appears.**
4. **Press (ENTER).**
   The stored names will appear.
5. **Press ↑ or ↓ repeatedly to select the disc name you want to erase.**
   The stored names will appear.
6. **Press (ENTER) for 2 seconds.**
   The name is erased.
   Repeat steps 5 and 6 if you want to erase other names.
7. **Press (ENTER).**
   The unit returns to normal CD play mode.

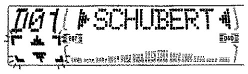
Notes
- *When the Disc Memo for a CD TEXT disc is erased, the original CD TEXT information is displayed.*
- *If you cannot find the Disc Memo you want to erase, try selecting a different CD unit in step 2.*

Locating a disc by name
— List-up (For a CD unit with the CD TEXT/ CUSTOM FILE function, or an MD unit)

You can use this function for discs that have been assigned custom names*1 or for CD TEXT discs*2.

*1 *Locating a disc by its custom name: when you assign a name for a CD (page 11) or an MD.*
*2 *Locating discs by the CD TEXT information: when you play a CD TEXT disc on a CD unit with the CD TEXT function.*

1. **Press (LIST).**
   The name assigned to the current disc appears in the display.



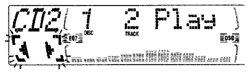
2. **Press ↑ or ↓ repeatedly until you find the desired disc.**
3. **Press (ENTER) to play the disc.**

Notes
- *Some letters cannot be displayed (exception: Disc Memo).*
- *If the optional TV monitor is connected, the list appears on the TV monitor instead of the display on the unit.*

Selecting specific tracks for playback
— Bank (For a CD unit with the CUSTOM FILE function)

If you label the disc, you can set the unit to skip or play the tracks of your choice.

1. **Start playing the disc you want to label.**
2. **Press (MENU), then press ↑ or ↓ repeatedly until "Bank Sel" appears.**
3. **Press (ENTER).**

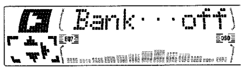


4. **Label the tracks.**
   ❶ **Press ← or → repeatedly to select the track you want to label.**
   ❷ **Press (ENTER) repeatedly to select "Play" or "Skip."**
5. **Repeat step 4 to set "Play" or "Skip" for all the tracks.**
6. **Press (ENTER).**
   The unit returns to normal CD play mode.

Notes
- *You can set "Play" and "Skip" for up to 24 tracks.*
- *You cannot set "Skip" for all the tracks on a CD.*

Playing specific tracks only
You can select:
- Bank on — to play the tracks with the "Play" setting.
- Bank inv (Inverse) — to play the tracks with the "Skip" setting.

1. **During playback, press (MENU), then press ↑ or ↓ repeatedly until "Bank on," "Bank inv," or "Bank off" appears.**
2. **Press → repeatedly until the desired setting appears.**



3. **Press (ENTER).**
   Playback starts from the track following the current one.

To return to normal play mode, select "Bank off" in step 2.

US MODEL

Radio
The unit can store up to 6 stations per band (FM1, FM2, FM3, AM1, and AM2).

Caution
When tuning in stations while driving, use Best Tuning Memory to prevent accidents.

Storing stations automatically
— Best Tuning Memory (BTM)

The unit selects the stations with the strongest signals within the selected band, and stores them in the order of their frequency.

1. **Press (SOURCE) repeatedly to select the radio.**
2. **Press (MODE) repeatedly to select the band.**
3. **Press (MENU), then press ↑ or ↓ repeatedly until "BTM" appears.**
4. **Press (ENTER).**
   A beep sounds when the setting is stored.

Notes
- *If only a few stations can be received due to weak signals, some number buttons will retain their former settings.*
- *When a number is indicated in the display, the unit starts storing stations from the one currently displayed.*

Receiving the stored stations
1. **Press (SOURCE) repeatedly to select the radio.**
2. **Press (MODE) repeatedly to select the band.**
3. **Press the number button ((1) to (6)) on which the desired station is stored.**

Tip
Press ↑ or ↓ to receive the stations in the order they are stored in the memory (Preset Search function).

If preset tuning does not work
Press either side of (SEEK) to search for the station (automatic tuning).
Scanning stops when the unit receives a station. Repeat until the desired station is received.

Tips
- *If automatic tuning stops too frequently, turn on the Local Seek to limit seek to stations with stronger signals (see "Changing the sound and display settings" on page 26).*
- *If you know the frequency of the station you want to listen to, press and hold either side of (SEEK) to locate the approximate frequency, then press (SEEK) repeatedly to fine adjust to the desired frequency (manual tuning).*

If FM stereo reception is poor
Select monaural reception mode
(see "Changing the sound and display settings" on page 26).
The sound improves, but becomes monaural ("ST" disappears).

Note
If interference occurs, this unit will automatically narrow the reception frequency to eliminate noise (IF Auto function). In such cases, some FM stereo broadcasts may become monaural while in the stereo reception mode.

Tip
To always hear FM stereo broadcasts in stereo, you can change the IF Auto setting and widen the frequency signal reception (see "Changing the sound and display settings" on page 26). Note that some interference may occur in this setting.

Storing only the desired stations
You can manually preset the desired stations on any chosen number button.

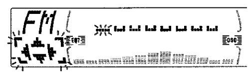
1. **Press (SOURCE) repeatedly to select the radio.**
2. **Press (MODE) repeatedly to select the band.**
3. **Press either side of (SEEK) to tune in the station that you want to store.**
4. **Press the desired number button ((1) to (6)) for 2 seconds until "MEM" appears.**
   The number button indication appears in the display.

Note
If you try to store another station on the same number button, the previously stored station will be erased.

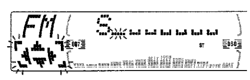
Storing station names
— Station Memo

You can assign a name to each radio station and store it in memory. The name of the station currently tuned in appears in the display. You can assign a name using up to 8 characters for a station.

Storing the station names
1. **Tune in a station whose name you want to store.**
2. **Press (MENU), then press ↑ or ↓ repeatedly until "Name Edit" appears.**
3. **Press (ENTER).**



4. **Enter the characters.**
   ❶ **Press ↑*1 repeatedly to select the desired character.**
   A → B → C ... → 0 → 1 → 2 ... → + → – → * ... → ␣ *2 → A
   *1 *For reverse order, press ↓.*
   *2 *(blank space)*
   ❷ **Press → after locating the desired character.**



   If you press ←, you can move back to the left.
   ❸ **Repeat steps ❶ and ❷ to enter the entire name.**
5. **Press (ENTER).**

continue to next page →

AEP, UK, E MODEL

Tips
- *Simply overwrite or enter " ␣ " to correct or erase a name.*
- *There is another way to start storing station names: Press (LIST) for 2 seconds instead of performing steps 2 and 3. You can also complete the operation by pressing (LIST) for 2 seconds instead of step 5.*

Erasing the station name

1 During radio reception, press (MENU), then press ↑ or ↓ repeatedly until "Name Del" appears.

2 Press (ENTER).

3 Press ↑ or ↓ repeatedly to select the station whose name you want to erase.

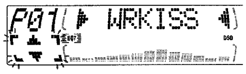
4 Press (ENTER) for 2 seconds.
The name is erased.
Repeat steps 3 to 4 if you want to erase other names.

5 Press (ENTER).
The unit returns to normal radio reception mode.

Note
If you have already erased all of the station names, "NO Data" appears in step 4.

Tuning in a station through a list
— List-up

1 During radio reception, press (LIST) momentarily.
The frequency or the name assigned to the current station appears in the display.



2 Press ↑ or ↓ repeatedly until you find the desired station.
If no name is assigned to the selected station, the frequency appears in the display.

3 Press (ENTER) to tune in the desired station.

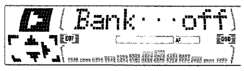
Note
If the optional TV monitor is connected, and if the monitor responds to this function, the list appears on the TV monitor instead of the display on the unit.

Playing specific tracks only

You can select:
- Bank on — to play the tracks with the "Play" setting.
- Bank inv (Inverse) — to play the tracks with the "Skip" setting.

1 During playback, press (MENU), then press ↑ or ↓ repeatedly until "Bank on," "Bank inv," or "Bank off" appears.

2 Press → repeatedly until the desired setting appears.



3 Press (ENTER).
Playback starts from the track following the current one.

To return to normal play mode, select "Bank off" in step 2.

Radio

The unit can store up to 6 stations per band (FM1, FM2, FM3, MW, and LW).

Caution
When tuning in stations while driving, use Best Tuning Memory to prevent accidents.

Storing stations automatically
— Best Tuning Memory (BTM)

The unit selects the stations with the strongest signals within the selected band, and stores them in the order of their frequency.

1 Press (SOURCE) repeatedly to select the radio.

2 Press (MODE) repeatedly to select the band.

3 Press (MENU), then press ↑ or ↓ repeatedly until "BTM" appears.

4 Press (ENTER).
A beep sounds when the setting is stored.

Notes
- *If only a few stations can be received due to weak signals, some number buttons will retain their former settings.*
- *When a number is indicated in the display, the unit starts storing stations from the one currently displayed.*

Receiving the stored stations

1 Press (SOURCE) repeatedly to select the radio.

2 Press (MODE) repeatedly to select the band.

3 Press the number button ((1) to (6)) on which the desired station is stored.

Tip
Press ↑ or ↓ to receive the stations in the order they are stored in the memory (Preset Search function).

If preset tuning does not work

Press either side of (SEEK) to search for the station (automatic tuning).
Scanning stops when the unit receives a station. Repeat until the desired station is received.

Tips
- *If automatic tuning stops too frequently, turn on the Local Seek to limit seek to stations with stronger signals (see "Changing the sound and display settings" on page 34).*
- *If you know the frequency of the station you want to listen to, press and hold either side of (SEEK) to locate the approximate frequency, then press (SEEK) repeatedly to fine adjust to the desired frequency (manual tuning).*

If FM stereo reception is poor

Select monaural reception mode
(see "Changing the sound and display settings" on page 34).
The sound improves, but becomes monaural ("ST" disappears).

Storing only the desired stations

You can manually preset the desired stations on any chosen number button.

1 Press (SOURCE) repeatedly to select the radio.

2 Press (MODE) repeatedly to select the band.

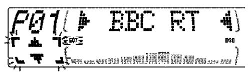
3 Press either side of (SEEK) to tune in the station that you want to store.

4 Press the desired number button ((1) to (6)) for 2 seconds until "MEM" appears.
The number button indication appears in the display.

Note
If you try to store another station on the same number button, the previously stored station will be erased.

Tuning in a station through a list
— List-up

1 During radio reception, press (LIST) momentarily.
The frequency or the name assigned to the current station appears in the display.



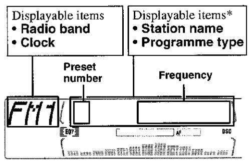
2 Press ↑ or ↓ repeatedly until you find the desired station.
If no name is assigned to the selected station, the frequency appears in the display.

3 Press (ENTER) to tune in the desired station.

RDS

Overview of RDS

FM stations with Radio Data System (RDS) service send inaudible digital information along with the regular radio programme signal. For example, one of the following will be displayed upon receiving a station with RDS capability.



* see "Tuning in stations by programme type" on page 20.

To	Press
Switch display item	(DSPL/PTY)

RDS services

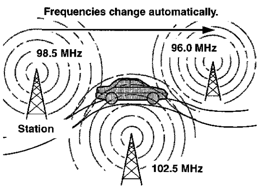
RDS data offers you other conveniences, such as:
- **Automatic retuning** of a programme, helpful during long-distance drives. — AF → page 18
- Receiving **traffic announcements**, even when enjoying another programme/source. — TA → page 19
- Selecting stations by the **type of programme** it broadcasts. — PTY → page 20
- Automatic clock time setting. — CT → page 21

Notes
- *Depending on the country or region, not all of the RDS functions are available.*
- *RDS may not work properly if the signal strength is weak or if the station you are tuned to is not transmitting RDS data.*

Automatic retuning for best reception results

— AF function

The alternative frequencies (AF) function allows the radio to always tune into the area's strongest signal for the station you are listening to.



1 Select an FM station (page 15).

2 Press (AF) repeatedly until "AF on" appears.
The unit starts searching for an alternative frequency with a stronger signal in the same network.
If "NO AF" flashes, the currently tuned into station does not have an alternative frequency.

Note
When there is no alternative frequency in the area or when you do not need to search for one, turn the AF function off by selecting "AF off."

For stations without alternative frequencies

Press either side of (SEEK) while the station name is flashing (within 8 seconds).
The unit starts searching for another frequency with the same PI (Programme Identification) data ("PI Seek" appears).
If the unit cannot find the same PI, the unit returns to the previously selected frequency.

Staying with one regional programme

When AF function is on: this unit's factory-set setting restricts reception to a specific region, so you won't be switched to another regional station with a stronger frequency.
If you leave this regional programme's reception area or would like to take advantage of the whole AF function, select "REG off" from the MENU (page 34).

Note
This function does not work in the United Kingdom and in some other areas.

Local Link function (United Kingdom only)

This function enables you to select other local stations in the area, even if they are not stored on your number buttons.

1 Press a number button ((1) to (6)) that has a local station stored on it.

2 Within 5 seconds, press the number button of the local station again.

3 Repeat this procedure until the desired local station is received.

Receiving traffic announcements

— TA/TP

By activating the Traffic Announcement (TA) and Traffic Programme (TP), you can automatically tune in an FM station broadcasting traffic announcements. These settings function regardless of the current FM programme/source, CD/MD; the unit switches back to the original source when the bulletin is over.

Press (TA) repeatedly until "TA on" appears.
The unit starts searching for traffic information stations.
"TP" indicates reception of such stations, and "TA" flashes during an actual traffic announcement. The unit will continue searching for stations available with TP if "NO TP" is indicated.

To cancel all traffic announcements, select "TA off."

To	Press
Cancel current announcement	(TA)

Tip
You can also cancel the current announcement by pressing (SOURCE) or (MODE).

Presetting the volume of traffic announcements

You can preset the volume level of the traffic announcements so you won't miss hearing them.

1 Press (VOL) to adjust the desired volume level.

2 Press (TA) for 2 seconds.
"TA" appears and the setting is stored.

Receiving emergency announcements

If either AF or TA is on, the unit will switch to emergency announcements, if one comes in while listening to an FM station or CD/MD.

Presetting RDS stations with AF and TA setting

When you preset RDS stations, the unit stores each station's AF/TA setting (on/off) as well as its frequency. You can select a different setting (for AF, TA, or both) for individual preset stations, or the same setting for all preset stations. If you preset stations with "AF on," the unit automatically stores stations with the strongest radio signal.

Presetting the same setting for all preset stations

1 Select an FM band (page 15).

2 Press (AF) and/or (TA) to select "AF on" and/or "TA on."
Note that selecting "AF off" or "TA off" stores not only RDS stations, but also non-RDS stations.

3 Press (MENU), then press ↑ or ↓ repeatedly until "BTM" appears.

4 Press (ENTER) until "BTM" flashes.

Presetting different settings for each preset station

1 Select an FM band, and tune in the desired station (page 16).

2 Press (AF) and/or (TA) to select "AF on" and/or "TA on."

3 Press the desired number button ((1) to (6)) until "MEM" appears.

Repeat from step 1 to preset other stations.

Tuning in stations by programme type

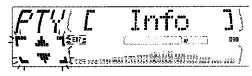
— PTY

You can tune in a station by selecting the type of programme you would like to listen to.

Programme types	Display
News	News
Current Affairs	Affairs
Information	Info
Sports	Sport
Education	Educate
Drama	Drama
Culture	Culture
Science	Science
Varied	Varied
Popular Music	Pop M
Rock Music	Rock M
Easy Listening	Easy M
Light Classical	Light M
Classical	Classics
Other Music Type	Other M
Weather	Weather
Finance	Finance
Children's Programmes	Children
Social Affairs	Social A
Religion	Religion
Phone In	Phone In
Travel	Travel
Leisure	Leisure
Jazz Music	Jazz
Country Music	Country
National Music	Nation M
Oldies Music	Oldies
Folk Music	Folk M
Documentary	Document

Note
You cannot use this function in some countries where no PTY (Programme Type selection) data is available.

1 Press (DSPL/PTY) during FM reception until "PTY" appears.



The current programme type name appears if the station is transmitting the PTY data.
"--------" appears if the received station is not an RDS station, or if the RDS data is not received.

2 Press ↑ or ↓ repeatedly until the desired programme type appears.
The programme types appear in the order shown in the table.
"--------" appears if the programme type is not specified in the RDS data.

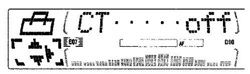
3 Press (ENTER).
The unit starts searching for a station broadcasting the selected programme type.

Setting the clock automatically

— CT

The CT (Clock Time) data from the RDS transmission sets the clock automatically.

1 During radio reception, press (MENU), then press ↑ or ↓ repeatedly until "CT off" appears.



2 Press → repeatedly until "CT on" appears.
The clock is set.

3 Press (ENTER) to return to the normal display.

To cancel the CT function, select "CT off" in step 2.

Notes
- *The CT function may not work even though an RDS station is being received.*
- *There might be a difference between the time set by the CT function and the actual time.*

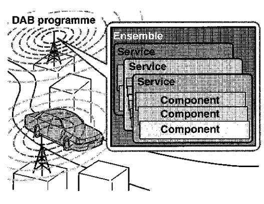
DAB (optional)

You can connect an optional DAB tuner to this unit.

Overview of DAB

DAB (Digital Audio Broadcasting) is a new multimedia broadcasting system that transmits audio programmes with a quality comparable to that of CDs. This is made possible by the use of a microcomputer in the DAB tuner which uses the radio signals sent from multiple aerials and multi-path signals (reflected radio waves) to boost the strength of the main signal. This makes DAB almost immune to radio interference even in a moving object such as a car.

Each DAB station bundles radio programmes (services) into an ensemble which it then broadcasts. Each service contains one or more components. All ensembles, services, and components are identified by name, so you can access any of them without having to know their frequencies.



Notes
- *The DAB system is still in a testing phase. Some services have not been sufficiently defined or are presently being tested. At present, such services are not supported by the optional DAB tuner unit XT-100DAB.*
- *DAB programmes are broadcast in Band-III (174 to 240 MHz) and L-Band (1,452 to 1,492 MHz), with each band divided into channels (41 in Band-III and 23 in L-Band). One ensemble is broadcast per channel by each DAB station.*

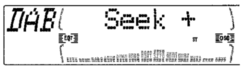
Basic operations of DAB

Searching for the ensemble and service
— Automatic Tuning

1 Press (SOURCE) repeatedly to select the radio.

2 Press (MODE) repeatedly to select "DAB."

3 Press and hold either side of (SEEK) until "Seek +" or "Seek –" appears.



The unit will stop seeking when an ensemble is located. The unit will then automatically select the first service and display its name, and the display indicator will change from "Seek +"/"Seek –" to the service name.

4 Press either side of (SEEK) to select the desired service.

Selecting the ensemble
— Manual Tuning

If you know the channel number of ensemble, follow the procedure below to tune in.

1 Press (SOURCE) repeatedly to select the radio.

2 Press (MODE) repeatedly to select "DAB."

3 Press ↑ or ↓ until "Ch. XXX" appears.



4 Press ↑ or ↓ repeatedly until the desired channel number appears.

Receiving the preset services
Following procedure is available after presetting the service. For details on presetting the services, refer to "Presetting DAB services automatically," (page 23) and "Presetting DAB services manually" (page 23).

1 Press (SOURCE) repeatedly to select the radio.

2 Press (MODE) repeatedly to select "DAB."

3 Press ↑ or ↓ repeatedly to select the preset service.

Tip
There is another way to receive the preset service (preset on numbers 1 to 6).
Press the number button ((1) to (6)) on which the desired service is stored.

Refer to the level indication to check the receiving condition of the DAB programme. The level indication increases as the strength of the receiving signal increases.



"Ꭺ" will flash in the display if the reception is poor.

Note
To display the level indication, select the spectrum analyzer pattern A-1 or A-2 (page 33).

Presetting DAB services automatically
— BTM

The BTM (Best Tuning Memory) function picks out DAB ensembles and automatically assigns the services within the ensembles to preset service numbers. The unit can preset up to 40 services.
If services have been previously set, the BTM function operates under the following conditions:
- If you activate the BTM function while listening to a preset service, the unit will store detected services (by overwriting) only to preset numbers higher than that of the current present service.
- If you activate the function while listening to a service that is not preset, the unit will replace the contents of all preset numbers.
- In both cases above, if the unit detects a service that is identical to one already preset, the previously stored service remains unchanged and the newly detected service is not preset.

1 While listening to a DAB programme, press (MENU).

2 Press ↑ or ↓ repeatedly until "BTM" appears.

3 Press (ENTER).
A beep sounds when the service is stored.
After activating the BTM function, the unit tunes the service assigned in the last smallest preset memory No. automatically.

Note
If the unit can only tune in a few services, the BTM function may not assign services to all the preset service numbers.

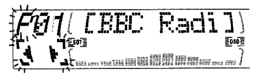
Presetting DAB services manually
— Preset Edit

You can also preset DAB services manually or delete a service which is already preset. Note that up to 40 services (preset either by the BTM function or manually) can be preset to the unit's memory.

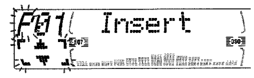
1 While listening to a DAB programme, press (MENU).

2 Press ↑ or ↓ repeatedly until "PRS Edit" appears, then press (ENTER).

3 Select the service and the preset number you want to preset.
❶ Press either side of (SEEK) to select the service.
❷ Press ↑ or ↓ to select the preset number.



❸ Press (ENTER).
The Preset Edit commands will appear in the display.



4 Press ↑ or ↓ to select the desired command.

5 Press (ENTER).
To edit other services, repeat steps 3 and 4.

continue to next page →

Replacing the services in preset memories
Press ↑ or ↓ to select "Over Wrt" in step 4, then press (ENTER).

Tip
There is another way to preset the service (on numbers 1 to 6).
After receiving the service, press the desired number button ((1) to (6)) until a beep sounds.

Adding the services in preset memories
Press ↑ or ↓ to select "Insert" in step 4, then press (ENTER).

Note
"Insert" does not appear if the maximum number of services (40) is already preset in memory.

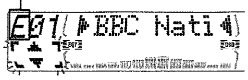
Erasing the services in preset memories
Press ↑ or ↓ to select "Delete" in step 4, then press (ENTER).

Tuning in DAB progra through a list

Follow the procedure below to tune in a DAB programme manually.

1 While listening to a DAB programme, press (LIST) repeatedly until "E" (ensemble list) appears.

E: ensemble list
S: service list
C: component list
P: preset list



All available ensembles will be listed.

2 Press ↑ or ↓ until the desired ensemble appears, then press (ENTER).
The first service for the ensemble is selected automatically.

3 Press (LIST) repeatedly until "S" (service list) appears.
All services available for the ensemble will be listed.

4 Press ↑ or ↓ repeatedly until the desired service appears, then press (ENTER).
The first component for the service is selected automatically.

5 Press (LIST) repeatedly until "C" (component list) appears.
All components available for the service will be listed.

6 Press ↑ or ↓ until the desired component appears, then press (ENTER).

Automatic updating of the ensemble list
When you perform the BTM function for the first time, all the ensembles available in your area are automatically stored. When you perform the BTM function again, the contents of these lists are updated in accordance with the conditions described on page 23.
An ensemble is added to the respective list when it is received during Automatic Tuning or Manual Tuning but is unlisted.
An ensemble is also deleted from the respective list when:
- you select an ensemble from the list, but it cannot be received.
- you perform Automatic Tuning or Manual Tuning to receive a listed ensemble, service, or the component, but it cannot be received.

Switching multi-channel audio and DRC

DAB can contain multi-channel audio. You can select main or sub-channel for reception. Also, if you turn on the DRC (Dynamic Range Control) function, the dynamic range on the service which supports DRC can automatically be extended.
The following items can be set:
- BLGL — to select the channel from either "Main" (main-channel) or "Sub" (sub-channel).
- DRC — to turn on or off the function.

1 While listening to a DAB programme, press (MENU).

2 Press ↑ or ↓ repeatedly until "DRC" or "BLGL" appears.

3 Press either side of (SEEK) to select the desired setting (Example: "on" or "off").

4 Press (ENTER).

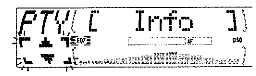
Note
"BLGL" appears in the menu only when the unit is receiving a multi-channel programme.

Locating a DAB service by programme type (PTY)

You can use the PTY (Programme type selection) function to tune in the programme you want.

1 While listening to a DAB programme, press (DSPL/PTY).

2 Press ↑ or ↓ repeatedly to select the programme type.



The programme types appear in the order shown on page 20.

3 Press (ENTER).
Searching for a service of the selected programme type begins automatically.

US, AEP, UK, E MODEL

Tuning up for your best sound

The unit provides the various functions to adjust the sound so that you can enjoy the best sounding music.

Setting the equalizer (EQ7)

You can select an equalizer curve for 7 music types (Vocal, Club, Jazz, New Age, Rock, Custom, and Xplod).
You can store and adjust the equalizer settings for frequency and level.

Selecting the equalizer curve

1 **Press (SOURCE) to select a source (radio, CD, or MD).**

2 **Press (EQ7) repeatedly until the desired equalizer curve.**
Each time you press (EQ7), the item changes.



To cancel the equalizing effect, select "off."
After 3 seconds, the display returns to the normal playback mode.

Adjusting the equalizer curve

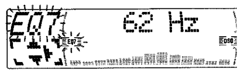
1 **Press (MENU).**

2 **Press ↑ or ↓ repeatedly until "EQ7 Tune" appears, then press (ENTER).**

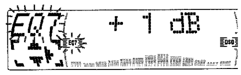
3 **Press ← or → to select the desired equalizer curve, then press (ENTER).**
Each time you press (SEEK), the item changes.

4 **Select the desired frequency and level.**
❶**Press ← or → to select the desired frequency.**
Each time you press ← or →, the frequency changes as follows:

62 Hz ←→ 157 Hz ←→ 396 Hz ←→ 1.0 kHz ←→ 2.5 kHz ←→ 6.3 kHz ←→ 16 kHz



❷**Press ↑ or ↓ to adjust the desired volume level.**
(CDX-M770)
The volume level is adjustable by 1 dB steps from –12 dB to +12 dB.
(CDX-M670/M620)
The volume level is adjustable by 1 dB steps from –10 dB to +10 dB.



To restore the factory-set equalizer curve, press (ENTER) for 2 seconds.

5 **Press (ENTER).**
After the effect setting is complete, the display returns to the normal playback mode.

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Setting the soundstage menu

— Dynamic Soundstage Organizer (DSO)

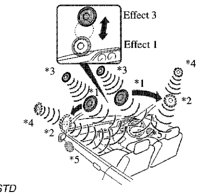
If your speakers are installed into the lower part of the doors, the sound will come from below and may not be clear.
The DSO (Dynamic Soundstage Organizer) function creates a more ambient sound as if there were speakers in the dashboard (virtual speakers).

Selecting the DSO mode (CDX-M770)

DSO mode of CDX-M770

Display window	Meaning
STD	Virtual speakers (Standard)
WIDE	Virtual speakers (Wide)
STD-SP	Standard+depth
WIDE-SP	Wide+depth
off	Cancel

Image of virtual speakers



*1 *STD*
*2 *Wide*
*3 *STD+depth*
*4 *Wide+depth*
*5 *Actual speakers position (lower part of the front doors)*

1 **Press (SOURCE) to select a source (tuner, CD, or MD).**

2 **Press (DSO) repeatedly to select the desired DSO mode.**



To cancel the DSO mode, select "off."
After 3 seconds, the display returns to the normal playback mode.

Tips
- *The DSO effect may be hard to discern depending on the type of car you are driving and the music you are listening to.*
- *When DSO setting is "WIDE," the FM reception is inaudible. In this case, reset the DSO setting to "STD."*

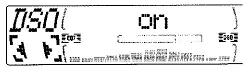
Turning the DSO mode on (off) (CDX-M670/M620)

DSO mode of CDX-M670/M620

Memory presets	Meaning
on	Virtual speakers
off	Cancel

1 **Press (SOURCE) to select a source (tuner, CD, or MD).**

2 **Press (DSO) to select "on" or "off".**



To cancel the DSO mode, select "DSO off."
After 3 seconds, the display returns to the normal playback mode.

Adjusting the DSO mode (CDX-M770)

1 **Press (SOURCE) to select a source (tuner, CD, or MD).**

2 **Press (MENU).**

3 **Press ↑ or ↓ repeatedly until "DSO tune" appears, then press (ENTER).**

4 **Press ← or → to select the desired DSO mode. then press (ENTER).**

5 **Select the effect level.**
You can select the desired effect from 3 effect lebels for each DSO mode.
Press ↑ or ↓ repeatedly to select desired effect.



To restore the effect, press (ENTER) for 2 seconds.

6 **Press (ENTER).**

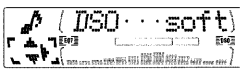
18

If the sound from the tweeter is too shrill (CDX-M770)

1 **While the unit is operating, press (MENU).**

2 **Press ↑ or ↓ repeatedly until "DSO norm" appears.**

3 **Press → to select "DSO soft."**



4 **Press (MENU).**

To restore the sound, select "DSO norm."

Listening to each programme source in its registered DSO

— Source Sound Memory (SSM)

Each time you return to the same source, you can hear the same DSO menu and equalizer curve registered for that source, even after changing the programme source or turning the unit off and then on again.

Adjusting the sound characteristics

You can adjust the sound characteristics.
The bass and treble levels and subwoofer volume can be stored independently for each source.

1 **Select the item you want to adjust by pressing (SOUND) repeatedly.**
Each time you press (SOUND), the item changes as follows:

(CDX-M770)
POS (position) → BAL (left-right) → F (front volume) → R (rear volume) → SUB (subwoofer volume)

(CDX-M670/M620)
BAS (bass) → TRE (treble) → BAL (left-right) → FAD (front-rear) → SUB (subwoofer volume)

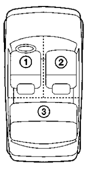
2 **Adjust the selected item by pressing ← or →.**
When adjusting with the rotary commander, press (SOUND) and rotate the VOL control.

Note
Adjust within 3 seconds after selecting the item.

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Selecting the listening position (CDX-M770 only)

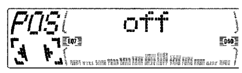
You can set a delayed time for the sound to reach the listeners from the speakers.
In this way, the unit can simulate a natural sound field so that you feel as if you are in the center of the sound field no matter where you sit in the car.



Display window	Centre of sound field
POS ALL	Normal setting (① + ② + ③)
POS Front	Front part (① + ②)
POS Front-R	Right front (②)
POS Front-L	Left front (①)
POS Rear	Rear part (③)
POS off	Cancel

1 **Press (SOURCE) to select a source (tuner, CD, or MD).**

2 **Press (SOUND) repeatedly until "POS" appears.**



3 **Press ← or → to select the desired listening position.**
All ←→ Front ←→ Front-R ←→ Front-L ←→ Rear ←→ off ←→ All

The listening positions appear in the order shown above.

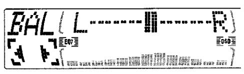
To cancel the POS mode, select "off."
After three seconds, the display returns to the normal playback mode.

Adjusting the balance (BAL)

You can adjust the sound balance from the left and right speakers.

1 **Press (SOURCE) to select a source (tuner, CD, or MD).**

2 **Press (SOUND) repeatedly until "BAL" appears.**



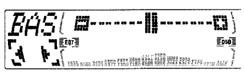
3 **Press ← or → to adjust the balance.**
After 3 seconds, the display returns to the normal playback mode.

Adjusting the bass (CDX-M670/M620 only)

You can adjust the bass from the speakers.

1 **Press (SOURCE) to select a source (tuner, CD, or MD).**

2 **Press (SOUND) repeatedly until "BAS" appears.**



3 **Press ← or → to adjust the balance.**
After 3 seconds, the display returns to the normal playback mode.

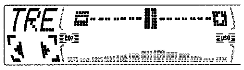
20

Adjusting the treble (CDX-M670/M620 only)

You can adjust the treble from the speakers.

1 **Press (SOURCE) to select a source (tuner, CD, or MD).**

2 **Press (SOUND) repeatedly until "TRE" appears.**



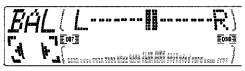
3 **Press ← or → to adjust the balance.**
After 3 seconds, the display returns to the normal playback mode.

Adjusting the balance (FAD) (CDX-M670/M620 only)

You can adjust the sound balance from the front and rear speakers.

1 **Press (SOURCE) to select a source (tuner, CD, or MD).**

2 **Press (SOUND) repeatedly until "FAD" appears.**

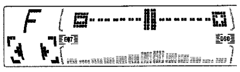


3 **Press ← or → to adjust the balance.**
After 3 seconds, the display returns to the normal playback mode.

Adjusting the front and rear volume (CDX-M770 only)

1 **Press (SOURCE) to select a source (tuner, CD, or MD).**

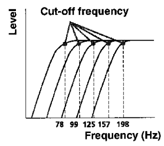
2 **Press (SOUND) repeatedly to select the "F" for the front speakers or "R" for the rear speakers.**



3 **Press ← or → to adjust the volume of front/rear speakers.**
After 3 seconds, the display returns to the normal playback mode.

Adjusting the cut-off frequency and the output volume level for the front/rear speakers

To match the characteristics of the installed speaker system, you can adjust the output volume level and select the cut-off frequency of the speakers.



1 **Press (MENU).**

2 **Press ↑ or ↓ repeatedly to select "Front HPF" or "Rear HPF."**

3 **Press (ENTER).**



continue to next page →

4 **Press ← or → to select the cut-off frequency.**
Each time you press ← or →, the frequency changes as follows:

off ←→ 78 Hz ←→ 99 Hz ←→ 125 Hz ←→ 157 Hz ←→ 198 Hz

5 **Press ↑ or ↓ to adjust the volume level.**
The volume level is adjustable by 1 dB steps from –12 dB to +12 dB.

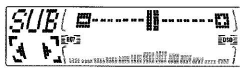
Tip
When you lower the volume all the way down, "– ∞dB" appears and the cut-off frequency is disabled.

6 **Press (ENTER).**
After the effect is complete, the display returns to the normal playback mode.

Adjusting the volume of the subwoofer(s)

1 **Press (SOURCE) to select a source (tuner, CD, or MD).**

2 **Press (SOUND) repeatedly until "SUB" appears.**

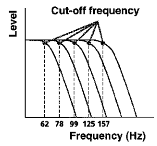


3 **Press ← or → to adjust the volume.**
After 3 seconds, the display returns to the normal playback mode.

Tip
When you press ← repeatedly to adjust the volume all the way down, "– ∞dB" appears and the cutout frequency of the subwoofer is disabled.

Adjusting the frequency of the subwoofer(s) (CDX-M770 only)

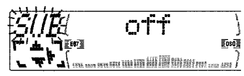
To match the characteristics of the connected subwoofer(s), you can cut out the unwanted high and middle frequency signals entering the subwoofer(s). By setting the cut-off frequency (see the diagram below), the subwoofer(s) will output only low frequency signals so you can get a clearer sound image.



1 **Press (MENU).**

2 **Press ↑ or ↓ repeatedly until "SUB LPF" appears.**

3 **Press (ENTER).**



4 **Press ← or → to select the desired cut-off frequency.**
Each time you press ← or →, the frequency changes as follows:

62 Hz ←→ 78 Hz ←→ 99 Hz ←→ 125 Hz ←→ 157 Hz ←→ off

5 **Press ↑ or ↓ to adjust the volume.**
The volume level is adjustable by 1 dB steps from –12 dB to +12 dB.

Tip
When you lower the volume all the way down, "– ∞dB" appears and the cut-off frequency is disabled.

6 **Press (ENTER).**
After the frequency setting is complete, the display returns to the normal playback mode.

Other adjustable items (CDX-M670/M620 only)

The following items can be adjusted:
- HPF (High pass filter) — to select the cut-off frequency to "off," "78 Hz," or "125 Hz."
- LPF (Low pass filter) — to select the cut-off frequency to "78 Hz," "125 Hz," or "off."
- Loud (Loudness) — to enjoy bass and treble even at low volumes. The bass and treble will be reinforced.

1 **Press (MENU).**
To set A.Scrl, press (MENU) during CD/MD playback.

2 **Press ↑ or ↓ repeatedly until the desired item appears.**

3 **Press → to select the desired setting (Example: "on" or "off").**

4 **Press (ENTER).**
After the mode setting is completed, the display returns to normal play mode.

Note
The displayed item will differ depending on the source.

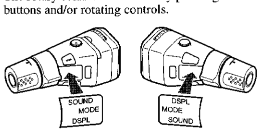
Tip
You can easily switch among categories by pressing ↑ or ↓ for 2 seconds.

Other Functions

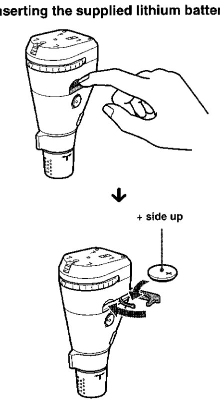
You can also control the unit (and optional CD/MD units) with a optional rotary commander. **RM-X5S (supplied with CDX-M770 only)**

Using the rotary commander

First, attach the appropriate label depending on how you want to mount the rotary commander. The rotary commander works by pressing buttons and/or rotating controls.



Inserting the supplied lithium battery

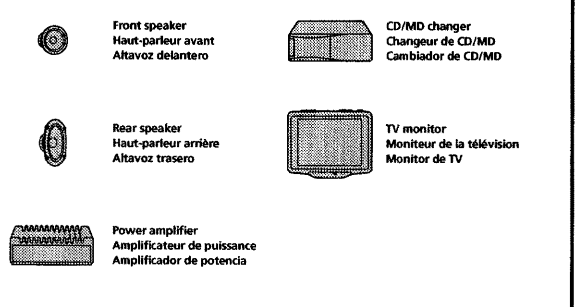


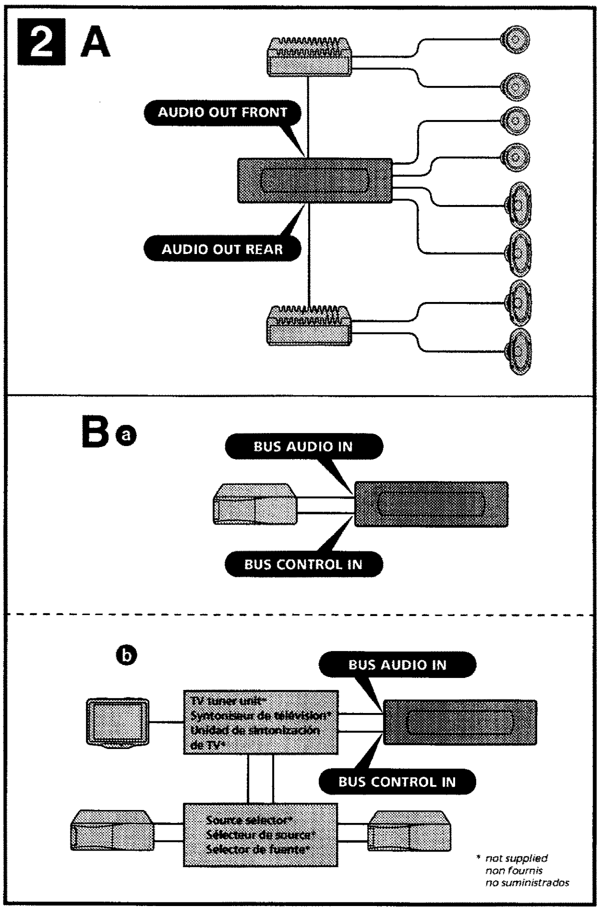
Tip
For information on lithium battery, refer to "Notes on lithium battery" (page 31).

continue to next page →

US MODEL
Connection

Equipment used in illustrations (not supplied)
Appareils utilisés dans les illustrations (non fournis)
Equipos utilizados en las ilustraciones (no suministrados)





Cautions

- This unit is designed for negative ground 12 V DC operation only.
- Do not get the wires under a screw, or caught in moving parts (e.g. seat railing).
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- **Run all ground wires to a common ground point.**
- Be sure to insulate any loose unconnected wires with electrical tape for safety.
- The use of optical instruments with this product will increase eye hazard.

Notes on the power supply cord (yellow)
- When connecting this unit in combination with other stereo components, the connected car circuit's rating must be higher than the sum of each component's fuse.
- When no car circuits are rated high enough, connect the unit directly to the battery.

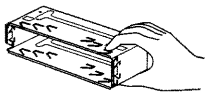
Parts list (1)

The numbers in the list are keyed to those in the instructions.

For the use of release key ⑫, see the supplied operating instructions.

Caution

Handle the bracket ① carefully to avoid injuring your fingers.



Connection example (2)

***Notes* (2-A)**

Be sure to connect the ground cord before connecting the amplifier.

***Tip* (2-B-b)**

For connecting two or more changers, the source selector XA-C30 (optional) is necessary.

Connection diagram (3)

❶ **To a metal surface of the car**
First connect the black ground lead, then connect the yellow and red power input leads.

❷ **To the power antenna control lead or power supply lead of antenna booster amplifier**
Notes
- *It is not necessary to connect this lead if there is no power antenna or antenna booster, or with a manually-operated telescopic antenna.*
- *When your car has a built-in FM/AM antenna in the rear/side glass, see "Notes on the control and power supply leads."*

❸ **To AMP REMOTE IN of an optional power amplifier**
This connection is only for amplifiers. Connecting any other system may damage the unit.

❹ **To the interface cable of a car telephone**

❺ **To a car's illumination signal**
Be sure to connect the black ground lead to it first.

❻ **To the +12 V power terminal which is energized in the accessory position of the ignition key switch**
Notes
- *If there is no accessory position, connect to the +12 V power (battery) terminal which is energised at all times.*
  Be sure to connect the black ground lead to it first.
- *When your car has a built-in FM/AM antenna in the rear/side glass, see "Notes on the control and power supply leads."*

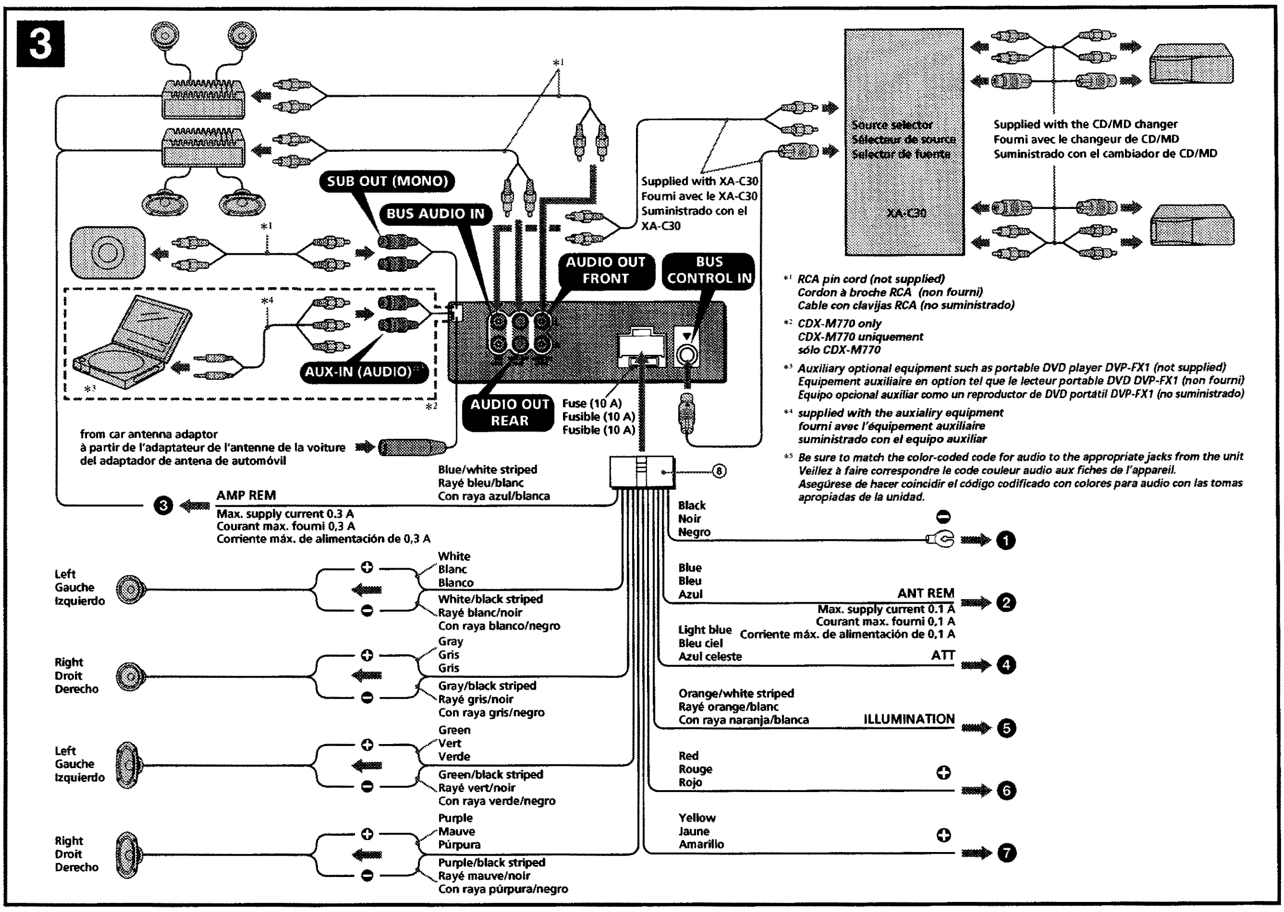
❼ **To the +12 V power terminal which is energised at all times**
Be sure to connect the black ground lead to it first.

Notes on the control and power supply leads
- *The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner.*
- *When your car has built-in FM/AM antenna in the rear/side glass, connect the power antenna control lead (blue) or the accessory power input lead (red) to the power terminal of the existing antenna booster. For details, consult your dealer.*
- *A power antenna without relay box cannot be used with this unit.*

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection
- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities to avoid its damage.*
- *Do not connect the speaker terminals to the car chassis, or connect the terminals of the right speakers with those of the left speaker.*
- *Do not connect the ground lead of this unit to the negative (–) terminal of the speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Connect only passive speakers. Connecting active speakers (with built-in amplifiers) to the speaker terminals may damage the unit.*
- *To avoid a malfunction, do not use the built-in speaker wires installed in your car if the unit shares a common negative (–) lead for the right and left speakers.*
- *Do not connect the unit's speaker cords to each other.*



Précautions

- Cet appareil est exclusivement conçu pour fonctionner sur une tension de 12 V CC avec masse négative.
- Evitez de fixer des vis sur les câbles ou de coincer ceux-ci dans des pièces mobiles (par exemple, armature de siège).
- Avant d'effectuer les raccordements, débranchez la borne de terre de la batterie du véhicule pour éviter tout court-circuit.
- Raccordez les fils d'entrée d'alimentation **jaune** et **rouge** seulement après avoir terminé tous les autres raccordements.
- **Rassemblez tous les fils de terre en un point de masse commun.**
- Veillez à isoler avec du chatterton tout fil lâche non raccordé.

Remarques sur le cordon d'alimentation (jaune)
- Lorsque cet appareil est raccordé à d'autres éléments stéréo, la valeur nominale des circuits de la voiture raccordée doit être supérieure à la somme des fusibles de chaque élément.
- Si aucun circuit de la voiture n'est assez puissant, raccordez directement l'appareil à la batterie.

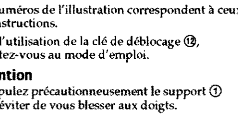
Liste des composants (1)

Les numéros de l'illustration correspondent à ceux des instructions.

Pour l'utilisation de la clé de déblocage ⑫, reportez-vous au mode d'emploi.

Attention

Manipulez précautionneusement le support ① pour éviter de vous blesser aux doigts.



Exemple de raccordement (2)

***Remarques* (2-A)**
Raccordez d'abord le fil de masse avant de raccorder l'amplificateur.

***Conseil* (2-B-ⓑ)**
Dans le cas du raccordement de deux changeurs ou plus, le sélecteur de source XA-C30 (en option) est indispensable.

Schéma de raccordement (3)

1 À un point métallique de la voiture
Branchez d'abord le fil de masse noir et, ensuite, les fils d'entrée d'alimentation jaune et rouge.

2 Vers le fil de commande de l'antenne électrique ou le fil d'alimentation de l'amplificateur d'antenne

Remarques
- *Il n'est pas nécessaire de raccorder ce fil s'il n'y a pas d'antenne électrique ni d'amplificateur d'antenne, ou avec une antenne télescopique manuelle.*
- *Si votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, voir "Remarques sur les fils de commande et d'alimentation".*

3 Au niveau du AMP REMOTE IN de l'amplificateur de puissance en option
Ce raccordement s'applique uniquement aux amplificateurs. Le branchement de tout autre système risque d'endommager l'appareil.

4 Vers le cordon de liaison d'un téléphone de voiture

5 Au signal d'éclairage de la voiture
Raccordez d'abord le fil de masse noir.

6 À la borne +12 V qui est alimentée quand la clé de contact est sur la position accessoires

Remarques
- *S'il n'y a pas de position accessoires, raccordez la borne d'alimentation (batterie) +12 V qui est alimentée en permanence. Raccordez d'abord le fil de masse noir.*
- *Si votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, voir "Remarques sur les fils de commande et d'alimentation".*

7 À la borne +12 V qui est alimentée en permanence
Raccordez d'abord le fil de masse noir.

Remarques sur les fils de commande et d'alimentation
- *Le fil de commande de l'antenne électrique (bleu) fournit une alimentation de + 12 V CC lorsque vous mettez l'appareil sous tension.*
- *Lorsque votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, raccordez la sortie de commande de l'antenne (bleu) ou l'entrée d'alimentation des accessoires (rouge) au bornier de l'amplificateur d'antenne existant. Pour plus de détails, consultez votre revendeur.*
- *Une antenne électrique sans boitier de relais ne peut pas être utilisée avec cet appareil.*

Raccordement pour la conservation de la mémoire
Lorsque le fil d'entrée d'alimentation jaune est raccordé, le circuit de la mémoire est alimenté en permanence même si la clé de contact est sur la position d'arrêt.

Remarques sur le raccordement des haut-parleurs
- *Avant de raccorder les haut-parleurs, mettez l'appareil hors tension.*
- *Utilisez des haut-parleurs ayant une impédance de 4 à 8 ohms avec une capacité de manipulation adéquate pour éviter de les endommager.*
- *Ne raccordez pas les bornes du système de haut-parleur au châssis de la voiture et ne raccordez pas les bornes du haut-parleur droit à celles du haut-parleur gauche.*
- *Ne raccordez pas le câble de masse de cet appareil à la borne négative (–) de l'enceinte.*
- *N'essayez pas de raccorder les haut-parleurs en parallèle.*
- *Raccordez uniquement des haut-parleurs passifs. Le raccordement de haut-parleurs actifs (avec amplificateurs intégrés) aux bornes des haut-parleurs peut endommager l'appareil.*
- *Pour éviter tout dysfonctionnement, n'utilisez pas les fils des haut-parleurs intégrés installés dans votre voiture si l'appareil partage un fil négatif commun (–) pour les haut-parleurs droit et gauche.*
- *Ne raccordez pas entre eux les cordons des haut-parleurs de l'appareil.*

Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- No coloque los cables debajo de ningún tornillo, ni los aprisione con partes móviles (p.ej. los raíles del asiento).
- Antes de realizar las conexiones, desconecte el terminal de puesta a masa de la batería del automóvil a fin de evitar cortocircuitos.
- Conecte los cables de entrada de alimentación **amarillo** y **rojo** solamente después de haber conectado los demás.
- **Conecte todos los conductores de puesta a masa a un punto común.**
- Por razones de seguridad, asegúrese de aislar con cinta eléctrica los cables sueltos que no estén conectados.

Notas sobre el cable de suministro de alimentación (amarillo)
- Cuando conecte esta unidad en combinación con otros componentes estéreo, la capacidad nominal del circuito conectado del automóvil debe ser superior a la suma del fusible de cada componente.
- Si no hay circuitos del automóvil con capacidad nominal suficientemente alta, conecte la unidad directamente a la batería.

Lista de componentes (1)

Los números de la lista corresponden a los de las instrucciones.

Con respecto al uso de la llave de liberación ⑫, consulte el manual de instrucciones suministrado.

Precaución

Tenga mucho cuidado al manipular el soporte ① para evitar posibles lesiones en los dedos.



Ejemplo de conexiones (2)

***Notas* (2-A)**
Asegúrese de conectar primero el cable de puesta a masa antes de realizar la conexión al amplificador.

***Consejo* (2-B-ⓑ)**
Si desea conectar dos o más cambiadores, necesitará el selector de fuente XA-C30 (opcional).

Diagramas de conexión (3)

1 A una superficie metálica del automóvil
Conecte primero el cable de masa negro, y después los cables amarillo y rojo de entrada de alimentación.

2 Al cable de control de la antena motorizada o al cable de fuente de alimentación del amplificador de antena

Notas
- *Si no se dispone de antena motorizada ni de amplificador de antena, o se utiliza una antena telescópica accionada manualmente, no será necesario conectar este cable.*
- *Si el automóvil incorpora una antena de FM/AM en el cristal trasero/lateral, consulte "Notas sobre los cables de control y de fuente de alimentación".*

3 Para conectar a AMP REMOTE IN del amplificador de potencia opcional
Esta conexión es sólo para amplificadores.
La conexión de cualquier otra sistema puede dañar la unidad.

4 Al cable de interfaz de un teléfono para automóvil

5 A una señal de iluminación del automóvil
Asegúrese de conectar primero el cable de masa negro.

6 Al terminal de alimentación de +12 V que recibe energía en la posición de accesorios del interruptor de la llave de encendido

Notas
- *Si no hay posición de accesorios, conéctelo al terminal de alimentación (batería) de +12 V que recibe energía sin interrupción. Asegúrese de conectar primero el cable de masa negro.*
- *Si el automóvil incorpora una antena de FM/AM en el cristal trasero/lateral, consulte "Notas sobre los cables de control y de fuente de alimentación".*

7 Al terminal de alimentación de +12 V que recibe energía sin interrupción
Asegúrese de conectar primero el cable de masa negro.

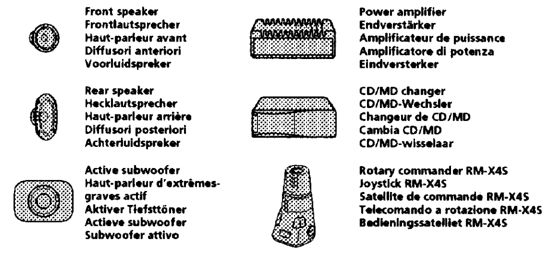
Notas sobre los cables de control y de fuente de alimentación
- *El conductor de control de la antena motorizada (azul) suministrará +12 V CC cuando conecte la alimentación del sintonizador.*
- *Si el automóvil dispone de una antena de FM/AM incorporada en el cristal trasero/lateral, conecte el cable de control de antena motorizada (azul) o el cable de entrada de alimentación auxiliar (rojo) al terminal de alimentación del amplificador de antena existente. Para obtener información detallada, consulte a su proveedor.*
- *Con esta unidad no es posible utilizar una antena motorizada sin caja de relé.*

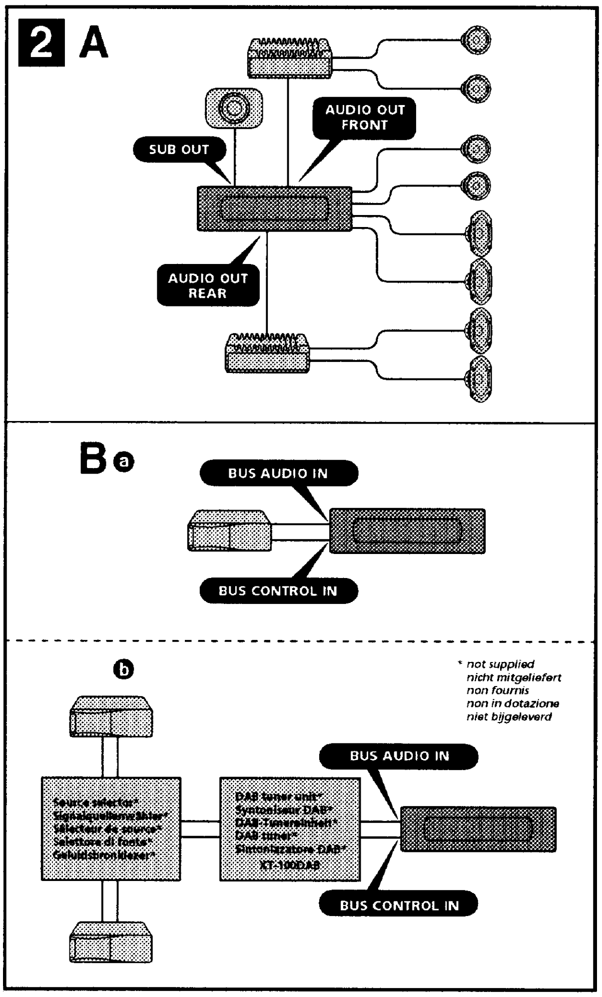
Conexión para protección de la memoria
Si conecta el conductor de entrada amarillo, el circuito de la memoria recibirá siempre alimentación, incluso aunque ponga la llave de encendido en la posición OFF.

Notas sobre la conexión de los altavoces
- *Antes de conectar los altavoces, desconecte la alimentación de la unidad.*
- *Utilice altavoces con una impedancia de 4 a 8 ohmios con la capacidad de potencia adecuada para evitar que se dañen.*
- *No conecte los terminales de altavoz al chasis del automóvil, ni conecte los terminales del altavoz derecho con los del izquierdo.*
- *No conecte el cable de puesta a tierra de esta unidad al terminal negativo (–) del altavoz.*
- *No intente conectar los altavoces en paralelo.*
- *Conecte solamente altavoces pasivos. Si conecta altavoces activos (con amplificadores incorporados) a los terminales de altavoz, puede dañar la unidad.*
- *Para evitar fallos de funcionamiento, no utilice los cables de altavoz incorporados instalados en el automóvil si su unidad comparte un cable negativo común (–) para los altavoces derecho e izquierdo.*
- *No conecte los cables de altavoz de la unidad entre sí.*

AEP, UK, E MODEL
Connection

Equipment used in illustrations (not supplied)
In Abbildungen dargestellte Geräte (nicht mitgeliefert)
Appareils utilisés dans les illustrations (non fournis)
Apparecchiatura utilizzata nelle illustrazioni (non in dotazione)
Apparatuur gebruikt voor illustratiedoeleinden (niet meegeleverd)





Cautions

- This unit is designed for negative earth 12 V DC operation only.
- Do not get the wires under a screw, or caught in moving parts (e.g. seat railing).
- Before making connections, turn the car ignition off to avoid short circuits.
- Connect the power connecting cord ⑧ to the unit and speakers before connecting it to the auxiliary power connector.
- **Run all earth wires to a common earth point.**
- Be sure to insulate any loose unconnected wires with electrical tape for safety.

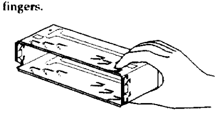
Notes on the power supply cord (yellow)
- When connecting this unit in combination with other stereo components, the connected car circuit's rating must be higher than the sum of each component's fuse.
- When no car circuits are rated high enough, connect the unit directly to the battery.

Parts list (1)

The numbers in the list are keyed to those in the instructions.

For the use of release key ⑫, see the supplied operating instructions.

Caution
Handle the bracket ① carefully to avoid injuring your fingers.



Connection example (2)

Notes (2-A)
- *Be sure to connect the earth cord before connecting the amplifier.*
- *If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.*

Tip (2-B-b)
For connecting two or more CD/MD changers, the source selector XA-C30 (optional) is necessary.

Connection diagram (3)

A To AMP REMOTE IN of an optional power amplifier
This connection is only for amplifiers. Connecting any other system may damage the unit.

B To the interface cable of a car telephone

Warning
If you have a power aerial without a relay box, connecting this unit with the supplied power connecting cord ⑧ may damage the aerial.

Notes on the control leads
- *The power aerial control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the AF (Alternative Frequency), TA (Traffic Announcement) function.*
- *When your car has built-in FM/MW/LW aerial in the rear/side glass, connect the power aerial control lead (blue) or the accessory power input lead (red) to the power terminal of the existing aerial booster. For details, consult your dealer.*
- *A power aerial without a relay box cannot be used with this unit.*

Memory hold connection
When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition switch is turned off.

Notes on speaker connection
- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities to avoid its damage.*
- *Do not connect the speaker terminals to the car chassis, or connect the terminals of the right speakers with those of the left speaker.*
- *Do not connect the earth lead of this unit to the negative (–) terminal of the speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Connect only passive speakers. Connecting active speakers (with built-in amplifiers) to the speaker terminals may damage the unit.*
- *To avoid a malfunction, do not use the built-in speaker wires installed in your car if the unit shares a common negative (–) lead for the right and left speakers.*
- *Do not connect the unit's speaker cords to each other.*

Vorsicht

- Dieses Gerät ist ausschließlich für den Betrieb bei 12 V Gleichstrom (negative Erdung) bestimmt.
- Achten Sie darauf, daß die Kabel nicht unter einer Schraube oder zwischen beweglichen Teilen wie z. B. in einer Sitzschiene eingeklemmt werden.
- Schalten Sie, bevor Sie irgendwelche Anschlüsse vornehmen, die Zündung des Fahrzeugs aus, um Kurzschlüsse zu vermeiden.
- Verbinden Sie das Stromversorgungskabel ⑧ mit dem Gerät und den Lautsprechern, bevor Sie es mit dem Hilfsstromanschluß verbinden.
- **Schließen Sie alle Erdungskabel an einen gemeinsamen Massepunkt an.**
- Aus Sicherheitsgründen müssen alle losen, nicht angeschlossenen Drähte mit Isolierband abisoliert werden.

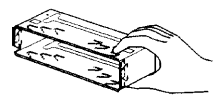
Hinweise zum Stromversorgungskabel (gelb)
- Wenn Sie dieses Gerät zusammen mit anderen Stereokomponenten anschließen, muß der Autostromkreis, an den die Geräte angeschlossen sind, eine höhere Leistung aufweisen als die Summe der Sicherungen der einzelnen Komponenten.
- Wenn kein Autostromkreis eine so hohe Leistung aufweist, schließen Sie das Gerät direkt an die Batterie an.

Teileliste (1)

Die Nummern in der Liste sind dieselben wie im Erläuterungstext.

Wie Sie den Löseschlüssel ⑫ verwenden, schlagen Sie bitte in der mitgelieferten Bedienungsanleitung nach.

Vorsicht
Seien Sie beim Umgang mit der Halterung ① vorsichtig, damit Sie sich nicht die Hände verletzen.



Anschlußbeispiel (2)

Hinweise (2-A)
- *Schließen Sie unbedingt zuerst das Massekabel an, bevor Sie den Verstärker anschließen.*
- *Wenn Sie einen gesondert erhältlichen Endverstärker anschließen und den integrierten Verstärker nicht benutzen, wird der Signalton deaktiviert.*

Tip (2-B-b)
Zum Anschließen von zwei oder mehr CD/MD-Wechslern wird der gesondert erhältliche Signalquellenwähler XA-C30 benötigt.

Anschlußdiagramm (3)

A An AMP REMOTE IN des gesondert erhältlichen Endverstärkers
Dieser Anschluß ist ausschließlich für Verstärker gedacht. Schließen Sie nichts anderes daran an. Andernfalls kann das Gerät beschädigt werden.

B An Schnittstellenkabel eines Autotelefons

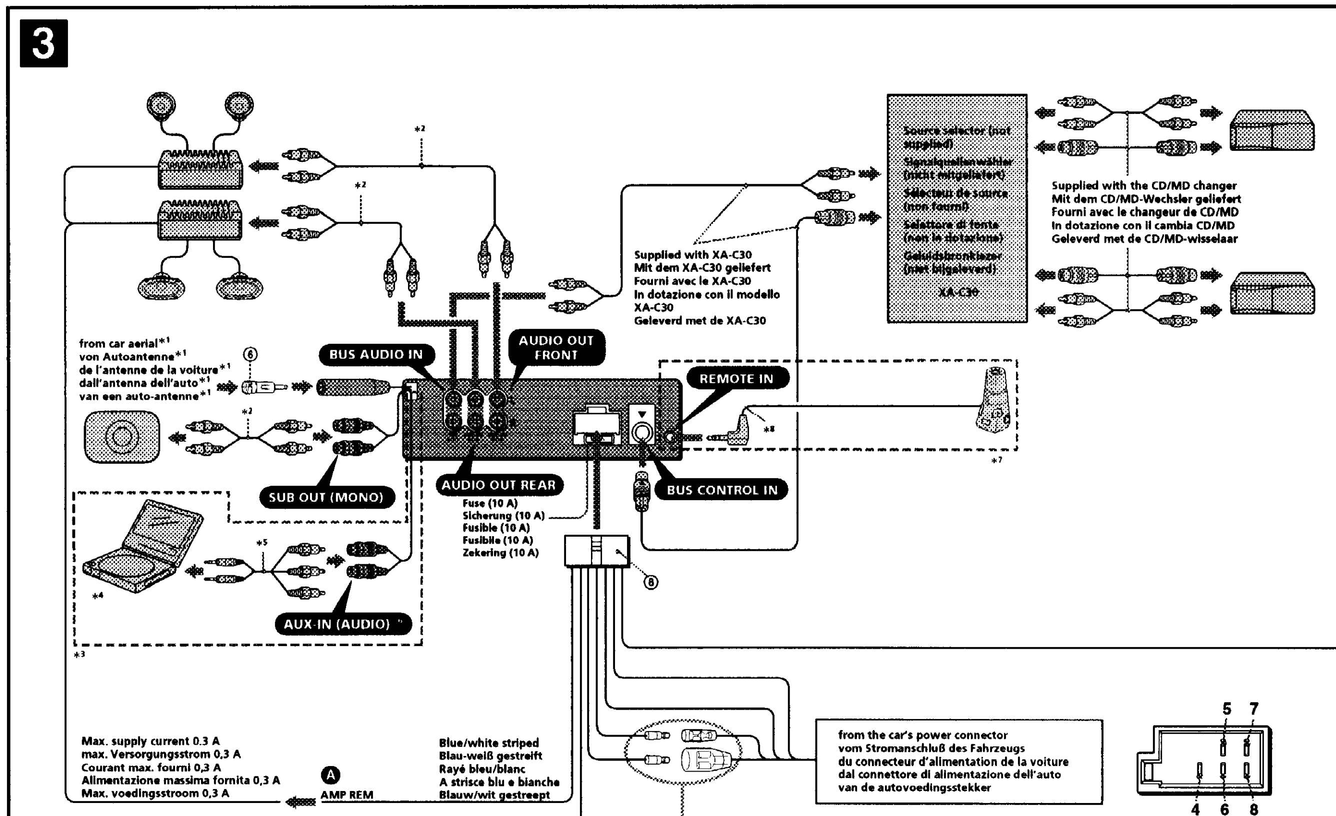
Warnung
Wenn Sie eine Motorantenne ohne Relaiskästchen verwenden, kann durch Anschließen dieses Geräts mit dem mitgelieferten Stromversorgungskabel ⑧ die Antenne beschädigt werden.

Hinweise zu den Steuerleitungen
- *Die Motorantennen-Steuerleitung (blau) liefert + 12 V Gleichstrom, wenn Sie den Tuner einschalten oder die AF- (Alternativfrequenzsuche) oder die TA-Funktion (Verkehrsdurchsagen) aktivieren.*
- *Wenn das Fahrzeug mit einer in der Heck-/Seitenfensterscheibe integrierten FM (UKW)/MW/LW-Antenne ausgestattet ist, schließen Sie die Motorantennen-Steuerleitung (blau) oder die Zubehörstromversorgungsleitung (rot) an den Stromversorgungsanschluß des vorhandenen Antennenverstärkers an. Näheres dazu erfahren Sie bei Ihrem Händler.*
- *Es kann nur eine Motorantenne mit Relaiskästchen angeschlossen werden.*

Stromversorgung des Speichers
Wenn das gelbe Stromversorgungskabel angeschlossen ist, wird der Speicher stets (auch bei ausgeschalteter Zündung) mit Strom versorgt.

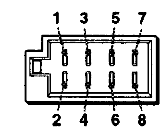
Hinweise zum Lautsprecheranschluß
- *Schalten Sie das Gerät aus, bevor Sie die Lautsprecher anschließen.*
- *Verwenden Sie Lautsprecher mit einer Impedanz zwischen 4 und 8 Ohm und ausreichender Belastbarkeit. Ansonsten können die Lautsprecher beschädigt werden.*
- *Verbinden Sie die Lautsprecheranschlüsse nicht mit dem Wagenchassis, und verbinden Sie auch nicht die Anschlüsse des rechten mit denen des linken Lautsprechers.*
- *Verbinden Sie die Masseleitung dieses Geräts nicht mit dem negativen (–) Lautsprecheranschluß.*
- *Versuchen Sie nicht, Lautsprecher parallel anzuschließen.*
- *An die Lautsprecheranschlüsse dieses Geräts dürfen nur Passivlautsprecher angeschlossen werden. Schließen Sie keine Aktivlautsprecher (Lautsprecher mit eingebauten Verstärkern) an, da diese sonst beschädigt werden können.*
- *Um Fehlfunktionen zu vermeiden, verwenden Sie nicht die im Fahrzeug installierten, integrierten Lautsprecherleitungen, wenn am Ende eine gemeinsame negative (–) Leitung für den rechten und den linken Lautsprecher verwendet wird.*
- *Verbinden Sie nicht die Lautsprecherkabel des Geräts miteinander.*

3



See "Power Connection diagram" on the reverse side for details.
Näheres dazu finden Sie im "Stromanschlußdiagramm". Blättern Sie dazu bitte um.
Voir le "Schéma de connexion d'alimentation" au verso pour plus de détails.
Per ulteriori informazioni, vedere "Diagramma dei collegamenti di alimentazione" che si trova sul retro.
Zie "Voedingsaansluitschema" op de achterkant voor meer details.

4	Yellow Gelb Jaune Giallo Geel	continuous power supply permanente Stromversorgung alimentation continue alimentazione continua continu voeding	7	Red Rot Rouge Rosso Rood	switched power supply geschaltete Stromversorgung alimentation commutée alimentazione commutata geschakelde voeding
5	Blue Blau Bleu Blu Blauw	power aerial control Motorantenne antenne électrique comando dell'antenna elettrica automatische antenne	8	Black Schwarz Noir Nero Zwart	earth Masse masse terra aarding
6	Orange/White Orange-weiß gestreift Rayé orange/blanc Arandone/bianco Oranje/wit	switched illumination power supply geschaltete Beleuchtungsstromversorgung alimentation de l'éclairage commuté alimentazione a illuminazione commutata geschakelde verlichting stroomvoorziening	*Positions 1, 2 and 3 do not have pins. An Position 1, 2 und 3 befinden sich keine Stifte. Les positions 1, 2 et 3 ne comportent pas de broches. Le posizioni 1, 2 e 3 non hanno piedini. De posities 1, 2 en 3 hebben geen pins.*		



1	Purple Violett Mauve Viola Paars	+	Speaker, Rear, Right Lautsprecher hinten rechts haut-parleur, arrière, droit Diffusore, posteriore, destro Luidspreker, achter, rechts	5	White Weiß Blanc Bianco Wit	+	Speaker, Front, Left Lautsprecher vorne links haut-parleur, avant, gauche Diffusore, anteriore, sinistro Luidspreker, voor, links
2		–	Speaker, Rear, Right Lautsprecher hinten rechts haut-parleur, arrière, droit Diffusore, posteriore, destro Luidspreker, achter, rechts	6		–	Speaker, Front, Left Lautsprecher vorne links haut-parleur, avant, gauche Diffusore, anteriore, sinistro Luidspreker, voor, links
3	Grey Grau Gris Grigio Grijs	+	Speaker, Front, Right Lautsprecher vorne rechts haut-parleur, avant, droit Diffusore, anteriore, destro Luidspreker, voor, rechts	7	Green Grün Vert Verde Groen	+	Speaker, Rear, Left Lautsprecher hinten links haut-parleur, arrière, gauche Diffusore, posteriore, sinistro Luidspreker, achter, links
4		–	Speaker, Front, Right Lautsprecher vorne rechts haut-parleur, avant, droit Diffusore, anteriore, destro Luidspreker, voor, rechts	8		–	Speaker, Rear, Left Lautsprecher hinten links haut-parleur, arrière, gauche Diffusore, posteriore, sinistro Luidspreker, achter, links

Negative polarity positions 2, 4, 6, and 8 have striped cords.
An den negativ gepolten Positionen (2, 4, 6 und 8) befinden sich gestreifte Adern.
Les positions de polarité négative 2, 4, 6 et 8 sont dotées de cordons rayés.
Le posizioni a polarità negativa 2, 4, 6 e 8 hanno cavi rigati.
De negatieve posities 2, 4, 6 en 8 hebben gestreepte kabels.

*1 ***Note for the aerial connecting***
If your car aerial is an ISO (International Organisation for Standardisation) type, use the supplied adaptor ⑥ to connect it. First connect the car aerial to the supplied adaptor, then connect it to the aerial jack of the master unit.
*2 ***RCA pin cord (not supplied)***
*3 ***CDX-M770 only***
*4 ***Auxiliary equipment such as portable DVD player DVP-FX1 (not supplied)***
*5 ***supplied with the auxialiry equipment***
*6 ***Be sure to match the colour-coded code for audio to the appropriate jacks from the unit.***
*7 ***CDX-M670,MDX-M690 only***
*8 ***Insert with the cord upwards***

*1 ***Hinweis zum Anschließen der Antenne***
Wenn Ihre Fahrzeugantenne der ISO-Norm (ISO = International Organization for Standardization - Internationale Normungsgemeinschaft) entspricht, schließen Sie sie mit Hilfe des mitgelieferten Adapters ⑥ an. Verbinden Sie zuerst die Fahrzeugantenne mit dem mitgelieferten Adapter, und verbinden Sie diesen dann mit der Antennenbuchse des Hauptgeräts.
*2 ***Cinchkabel (nicht mitgeliefert)***
*3 ***nur CDX-M770***
*4 ***Zusätzliche Geräte wie z. B. der tragbare DVD-Player DVP-FX1***
*5 ***mit den Zusatzgeräten mitgeliefert***
*6 ***Achten Sie darauf, das farbcodierte Audiokabel mit den richtigen Buchsen am Gerät zu verbinden.***
*7 ***nur CDX-M670 und MDX-M690***
*8 ***Mit dem kabel nach oben einsetzen!***

*1 ***Remarque sur le raccordement de l'antenne***
Si votre antenne de voiture est de type ISO (organisation internationale de normalisation), utilisez l'adaptateur fourni ⑥ pour la raccorder. Raccordez d'abord l'antenne de voiture à l'adaptateur fourni et, ensuite, à la prise d'antenne de l'appareil principal.
*2 ***Cordon à broche RCA (non fourni)***
*3 ***CDX-M770 uniquement***
*4 ***Equipement auxiliaire en option tel que le lecteur portable DVD DVP-FX1***
*5 ***fourni avec l'équipement auxiliaire***
*6 ***Veillez à faire correspondre le code couleur audio aux fiches de l'appareil.***
*7 ***CDX-M670,MDX-M690 uniquement***
*8 ***Insérez avec le câble vers le haut***

*1 ***Nota per il collegamento dell'antenna***
Se la vostra antenna della macchina è di tipo ISO (International Organization Standardization), utilizzare l'adattatore ⑥ in dotazione per collegarla. Collegare prima l'antenna della macchina all'adattatore in dotazione, quindi collegarla alla presa dell'antenna dell'apparecchio principale.
*2 ***Cavo a piedini RCA (non in dotazione)***
*3 ***solo CDX-M770***
*4 ***Apparecchio opzionale ausiliario quale il lettore DVD portatile DVP-FX1***
*5 ***in dotazione con l'apparecchio ausiliario***
*6 ***Assicurarsi che i cavi differenziati in base al colore per l'audio corrispondano alle prese appropriate dell'apparecchio.***
*7 ***solo CDX-M670,MDX-M690***
*8 ***Inserire con il cavo rivolto verso l'alto***

*1 ***Opmerking bij de antenne-aansluiting***
Indien uw wagen is uitgerust met een antenne van het type ISO (International Organisation for Standardization), moet u die aansluiten met behulp van de meegeleverde adaptor ⑥. Sluit eerst de auto-antenne aan op de meegeleverde adaptor en vervolgens de antennestekker op het hoofdtoestel.
*2 ***Tulpstekkersnoer (niet bijgeleverd)***
*3 ***alleen CDX-M770***
*4 ***Los verkrijgbare apparatuur zoals de draagbare DVD-speler DVP-FX1***
*5 ***meegeleverd met de los verkrijgbare apparatuur***
*6 ***Zorg ervoor dat de kleurcode voor audio overeenkomt met de betreffende aansluitingen op het toestel.***
*7 ***alleen CDX-M670, MDX-M690***
*8 ***Inbrengen met het snoer naar boven***

Précautions

- Cet appareil est conçu pour fonctionner sur courant continu de 12 V avec masse négative.
- Evitez de fixer des vis sur les câbles ou de coincer ceux-ci dans des pièces mobiles (par exemple, armature de siège).
- Avant d'effectuer des raccordements, éteignez le moteur pour éviter les courts-circuits.
- Branchez le cordon d'alimention ⑧ sur l'appareil et les haut-parleurs avant de le brancher sur le connecteur d'alimentation auxiliaire.
- **Rassemblez tous les fils de terre en un point de masse commun.**
- Veillez à isoler avec du chatterton tout fil lâche non raccordé.

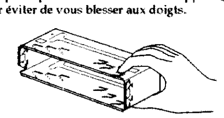
Remarques sur le cordon d'alimentation (jaune)
- Lorsque cet appareil est raccordé à d'autres éléments stéréo, la valeur nominale des circuits de la voiture raccordée doit être supérieure à la somme des fusibles de chaque élément.
- Si aucun circuit de la voiture n'est assez puissant, raccordez directement l'appareil à la batterie.

Liste des composants (1)

Les numéros de l'illustration correspondent à ceux des instructions.

Pour l'utilisation de la clé de déblocage ⑫, reportez-vous au mode d'emploi.

Attention
Manipulez précautionneusement le support ① pour éviter de vous blesser aux doigts.



Exemple de raccordement (2)

Remarques (2-A)
- *Raccordez d'abord le fil de masse avant de raccorder l'amplificateur.*
- *Si vous raccordez un amplificateur de puissance indépendant et que vous n'utilisez pas l'amplificateur intégré, le bip sonore est désactivé*

Conseil (2-B-Ⓑ)
Dans le cas du raccordement de deux changeurs de CD/MD ou plus, le sélecteur de source XA-C30 (en option) est indispensable.

Schéma de raccordement (3)

Ⓐ **Au niveau du AMP REMOTE IN d'un amplificateur de puissance facultatif**
Ce raccordement existe seulement pour les amplificateurs. Le raccordement à tout autre système peut endommager l'appareil.

Ⓑ **Vers le cordon de liaison d'un téléphone de voiture**

Avertissement
Si vous disposez d'une antenne électrique sans boîtier de relais, le branchement de cet appareil au moyen du cordon d'alimentation fourni ⑧ risque d'endommager l'antenne.

Remarques sur les fils de contrôle
- *Le fil de commande (bleu) de l'antenne électrique assure une alimentation de +12 V CC lorsque vous mettez le syntoniseur sous tension ou lorsque vous activez la fonction AF (fréquence secondaire) ou TA (informations routières).*
- *Lorsque votre voiture est équipée d'une antenne FM/MW/LW intégrée dans la vitre arrière/latérale, raccordez la sortie de commande de l'antenne (bleu) ou l'entrée d'alimentation des accessoires (rouge) au bornier de l'amplificateur d'antenne existant. Pour plus de détails, consultez votre revendeur.*
- *Une antenne électrique sans boitier de relais ne peut pas être utilisée avec cet appareil.*

Raccordement pour la conservation de la mémoire
Lorsque le fil d'entrée d'alimentation jaune est raccordé, le circuit de la mémoire est alimenté en permanence même si la clé de contact est sur la position d'arrêt.

Remarques sur le raccordement des haut-parleurs
- *Avant de raccorder les haut-parleurs, mettez l'appareil hors tension.*
- *Utilisez des haut-parleurs ayant une impédance de 4 à 8 ohms avec une capacité de manipulation adéquate pour éviter de les endommager.*
- *Ne raccordez pas les bornes du système de haut-parleurs au châssis de la voiture et ne raccordez pas les bornes du haut-parleur droit à celles du haut-parleur gauche.*
- *Ne raccordez pas le câble de masse de cet appareil à la borne négative (–) de l'enceinte.*
- *N'essayez pas de raccorder les haut-parleurs en parallèle.*
- *Raccordez uniquement des haut-parleurs passifs. Le raccordement de haut-parleurs actifs (avec amplificateurs intégrés) aux bornes des haut-parleurs peut endommager l'appareil.*
- *Pour éviter tout dysfonctionnement, n'utilisez pas les fils des haut-parleurs intégrés installés dans votre voiture si l'appareil partage un fil négatif commun (–) pour les haut-parleurs droit et gauche.*
- *Ne raccordez pas entre eux les cordons des haut-parleurs de l'appareil.*

Attenzione

- Questo apparecchio è stato progettato per l'uso solo a 12 V CC con massa negativa.
- Evitare che i cavi rimangano bloccati da una vite o incastrati nelle parti mobili (ad esempio nelle guide scorrevoli dei sedili).
- Prima di effettuare i collegamenti, spegnere il motore dell'automobile onde evitare di causare cortocircuiti.
- Collegare il cavo di collegamento dell'alimentazione ⑧ all'apparecchio e ai diffusori prima di collegarlo al connettore di alimentazione ausiliare.
- **Portare tutti i cavi di massa a un punto di massa comune.**
- Per sicurezza, assicurarsi di isolare qualsiasi cavo non collegato mediante apposito nastro.

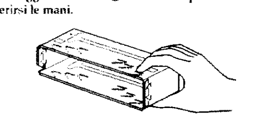
Note sul cavo di alimentazione (giallo)
- Se questo apparecchio viene collegato con altri componenti stereo, la potenza nominale dei circuiti dell'automobile deve essere superiore a quella prodotta dalla somma dei fusibili di ciascun componente.
- Se la potenza nominale dei circuiti dell'automobile non è sufficiente, collegare l'apparecchio direttamente alla batteria.

Elenco dei componenti (1)

I numeri nella lista corrispondono a quelli riportati nelle istruzioni.

Per informazioni sull'utilizzo del tasto di rilascio ⑫, vedere le istruzioni per l'uso in dotazione.

Attenzione
Maneggiare la staffa ① con cautela per evitare di ferirsi le mani.



Esempi di collegamento (2)

Note (2-A)
- *Assicurarsi di collegare il cavo di terra prima di collegare l'apparecchio all'amplificatore.*
- *Se si collega un amplificatore di potenza opzionale e non si utilizza l'amplificatore incorporato, il segnale acustico verrà disattivato.*

Suggerimento (2-B-Ⓑ)
Per collegare due o più cambia CD/MD, si deve utilizzare il selettore di fonte XA-C30 (opzionale).

Schema di collegamento (3)

Ⓐ **A AMP REMOTE IN di un amplificatore di potenza opzionale**
Questo collegamento è riservato esclusivamente agli amplificatori. Non collegare un tipo di sistema diverso onde evitare di causare danni all'apparecchio.

Ⓑ **Al cavo interfaccia di un telefono per auto**

Avvertenza
Quando si collega l'apparecchio con il cavo di alimentazione in dotazione ⑧, si potrebbe danneggiare l'antenna elettrica se questa non ha la scatola di relè.

Note sui cavi di controllo
- *Il cavo di controllo dell'antenna elettrica (blu) fornisce corrente continua +12 V CC quando si accende il sintonizzatore o quando si attiva la funzione AF (frequenza alternativa) o TA (notiziario sul traffico).*
- *Se l'automobile è dotata di antenna FM/MW/LW incorporata nel vetro posteriore/laterale, collegare il cavo (blu) di controllo dell'antenna elettrica o il cavo (rosso) di ingresso dell'alimentazione opzionale al terminale di alimentazione del preamplificatore dell'antenna esistente. Per ulteriori informazioni, consultare il proprio fornitore.*
- *Non è possibile usare un'antenna elettrica senza scatola a relè con questo apparecchio.*

Collegamento per la conservazione della memoria
Quando il cavo di ingresso alimentazione giallo è collegato, viene sempre fornita alimentazione al circuito di memoria anche quando la chiavetta a accensione è spenta.

Note sul collegamento dei diffusori
- *Prima di collegare i diffusori spegnere l'apparecchio.*
- *Usare diffusori di impedenza compresa tra 4 e 8 ohm e con capacità di potenza adeguata, altrimenti i diffusori potrebbero venir danneggiati.*
- *Non collegare i terminali del sistema diffusori al telaio dell'auto e non collegare i terminali del diffusore destro a quelli del diffusore sinistro.*
- *Non collegare il cavo di terra di questo apparecchio al terminale negativo (–) del diffusore.*
- *Non collegare i diffusori in parallelo.*
- *Non collegare alcun diffusore attivo (con amplificatore incorporato) ai terminali dei diffusori dell'apparecchio perché si potrebbero danneggiare i diffusori attivi. Assicurarsi di collegare diffusori passivi a questi terminali.*
- *Per evitare problemi di funzionamento, non utilizzare i cavi dei diffusori incorporati installati nell'automobile se il terminale dell'apparecchio condivide un cavo comune negativo (–) per i diffusori destro e sinistro.*
- *Non collegare fra loro i cavi dei diffusori dell'apparecchio.*

Let op!

- Dit apparaat is ontworpen voor gebruik op gelijkstroom van een 12 Volts auto-accu, negatief geaard.
- Zorg ervoor dat de draden niet onder een schroef of tussen bewegende onderdelen (b.v. zetelrail) terechtkomen.
- Alvorens aansluitingen te verrichten moet u het contact afzetten om kortsluiting te vermijden.
- Sluit het netsnoer ⑧ aan op het toestel en de luidsprekers vooraleer u het op de hulpvoedingsaansluiting aansluit.
- **Sluit alle aarddraden op een gemeenschappelijk aardpunt aan.**
- Voorzie niet aangesloten draden om veiligheidsredenen altijd van isolatietape.

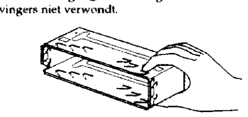
Opmerkingen bij de voedingskabel (geel)
- Wanneer u dit toestel aansluit samen met andere componenten, moet het vermogen van de aangesloten autostroomkring groter zijn dan de som van de zekeringen van elke component afzonderlijk.
- Wanneer het vermogen ontoereikend is, moet u het toestel rechtstreeks aansluiten op de batterij.

Onderdelenlijst (1)

De nummers in de afbeelding verwijzen naar die in de montage-aanwijzingen.

Raadpleeg de meegeleverde gebruiksaanwijzing om de speciale sleutel te bedienen ⑫.

Voorzichtig
Houd de beugel ① voorzichtig vast zodat u uw vingers niet verwondt.



Voorbeeldaansluitingen (2)

Opmerkingen (2-A)
- *Sluit eerst de massakabel aan alvorens de versterker aan te sluiten.*
- *Als u een los verkrijgbare vermogensversterker aansluit en de ingebouwde versterker niet gebruikt, is de pieptoon uitgeschakeld.*

Tip (2-B-Ⓑ)
Om twee of meer CD/MD-wisselaars aan te sluiten, hebt u de geluidsbronkiezer XA-C30 (optioneel) nodig.

Aansluitschema (3)

Ⓐ **Naar AMP REMOTE IN van een los verkrijgbare vermogensversterker**
Deze aansluiting is alleen bedoeld voor versterkers. Door een ander systeem aan te sluiten kan het toestel worden beschadigd.

Ⓑ **Naar het interface-snoer van een autotelefoon**

Opgelet
Indien u een elektrische antenne heeft zonder relaiskast, kan het aansluiten van deze eenheid met het bijgeleverde netsnoer ⑧ de antenne beschadigen.

Opmerking betreffende de aansluitsnoeren
- *De voedingskabel (blauw) van de elektrisch bediende antenne levert +12V gelijkstroom wanneer u de tuner aanschakelt of de functie AF (Alternative Frequency) of TA (Traffic Announcement) activeert.*
- *Wanneer uw auto is uitgerust met een FM/MW/LW-antenne in de achterruit/voorruit, moet u de antennevoedingskabel (blauw) of de hulpvoedingskabel (rood) aansluiten op de voedingsingang van de bestaande antenneversterker. Raadpleeg uw dealer voor meer details.*
- *Met dit apparaat is het niet mogelijk een automatische antenne zonder relaishuis te gebruiken.*

Instandhouden van het geheugen
Zolang de gele stroomdraad is aangesloten, blijft de stroomvoorziening van het geheugen intact, ook wanneer het contact van de auto wordt uitgeschakeld.

Opmerkingen betreffende het aansluiten van de luidsprekers
- *Zorg dat het apparaat is uitgeschakeld, alvorens de luidsprekers aan te sluiten.*
- *Gebruik luidsprekers met een impedantie van 4 tot 8 Ohm en let op dat die het vermogen van de versterker kunnen verwerken. Als dit wordt verzuimd, kunnen de luidsprekers ernstig beschadigd raken.*
- *Verbind in geen geval de aansluitingen van de luidsprekers met het chassis van de auto en sluit de aansluitingen van de rechter en linker luidspreker niet op elkaar aan.*
- *Verbind de massakabel van dit toestel niet met de negatieve (–) aansluiting van de luidspreker.*
- *Probeer nooit de luidsprekers parallel aan te sluiten.*
- *Sluit geen actieve luidsprekers (met ingebouwde versterkers) aan op de luidspreker-aansluiting van dit apparaat. Dit zal leiden tot beschadiging van de actieve luidsprekers. Sluit dus altijd uitsluitend luidsprekers zonder ingebouwde versterker aan.*
- *Om defecten te vermijden mag u de bestaande luidsprekerbedrading in uw auto niet gebruiken wanneer er een gemeenschappelijke negatieve (–) draad is voor de rechter en linker luidsprekers.*
- *Verbind de luidsprekerdraden niet met elkaar.*

SECTION 2
DISASSEMBLY

Note : This set can be disassemble according to the following sequence.

Front Panel Assy (Normal) → CD Mechanism Block, Front Panel (KEY) Assy
Front Panel Assy (Inoperative) → CD Mechanism Block, Front Panel (KEY) Assy

→ Sub Panel (CD) Sub Assy → Motor Block Assy, Cam (R) Assy → Main Board → Heat Sink

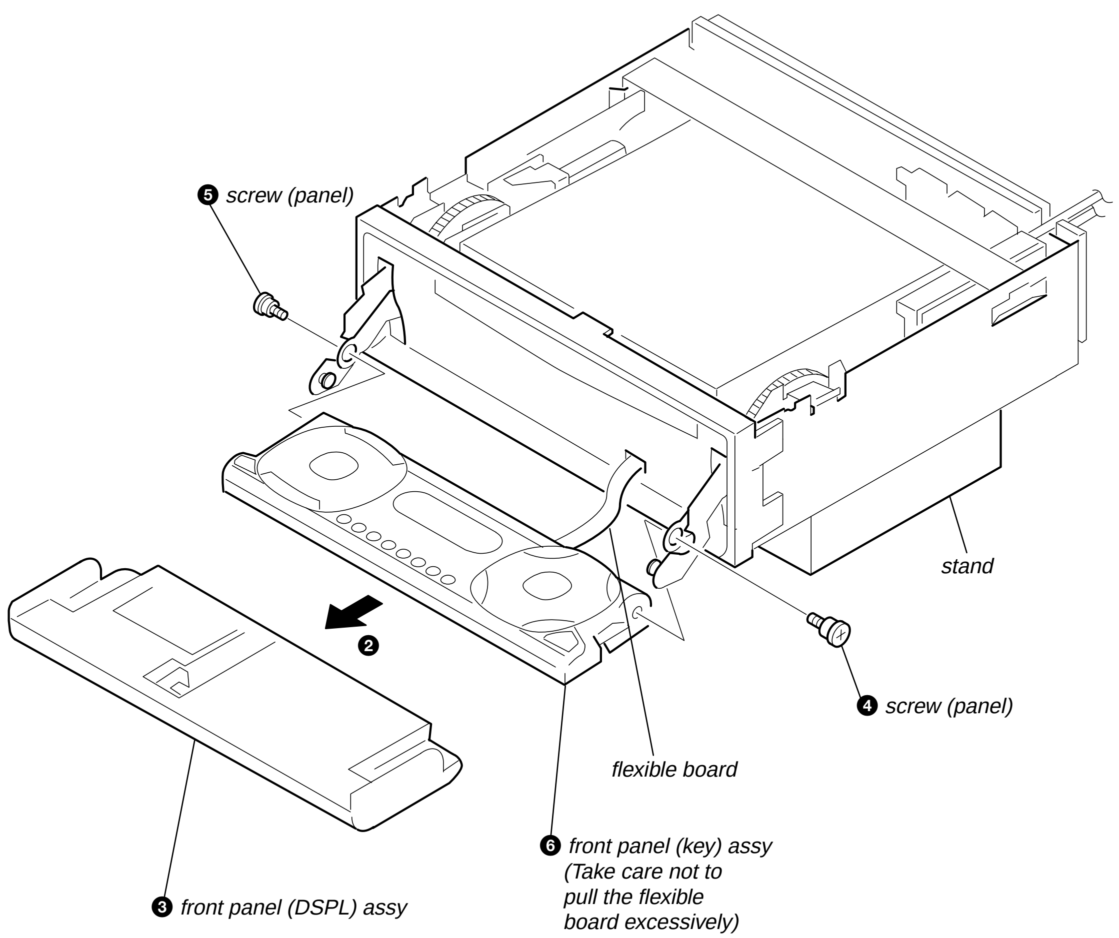
→ Chassis (T) Sub Assy → Lever Section
→ Chassis (T) Sub Assy → Servo Board → Shaft Roller Assy → Floating Block Assy

→ Optical Pick-up Block

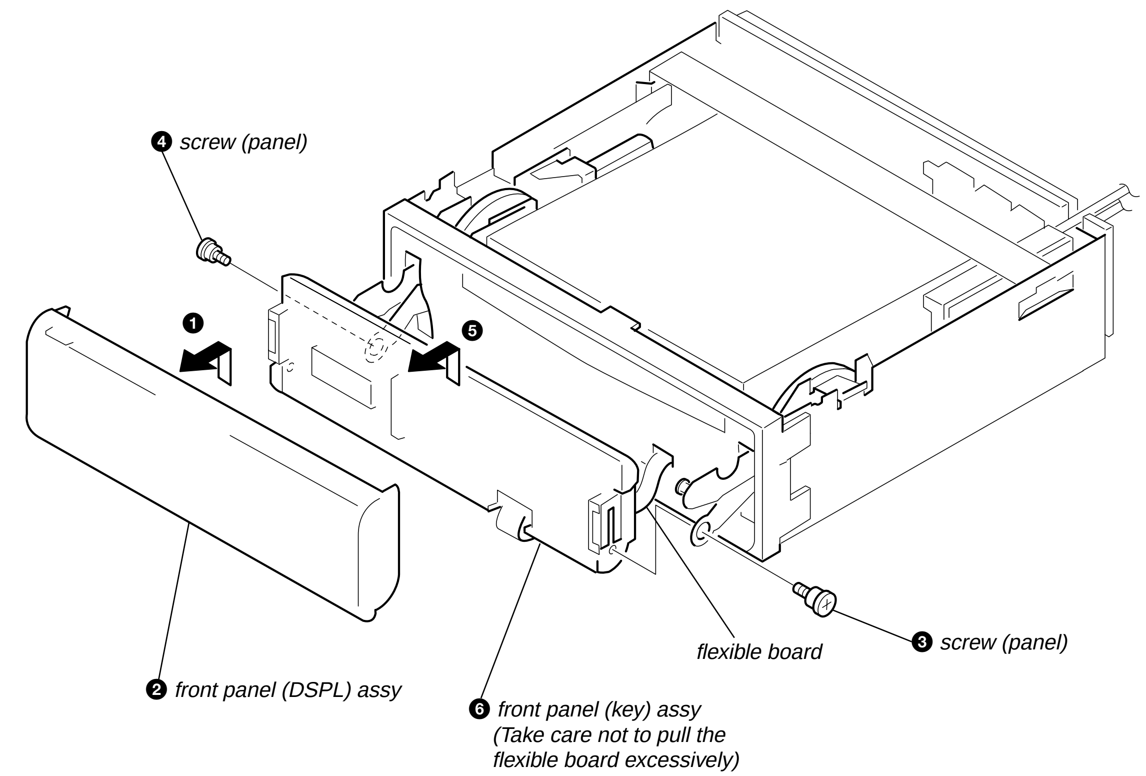
Note : Follow the disassembly procedure in the numerical order given.

2-1. FRONT PANEL ASSY (NORMAL)

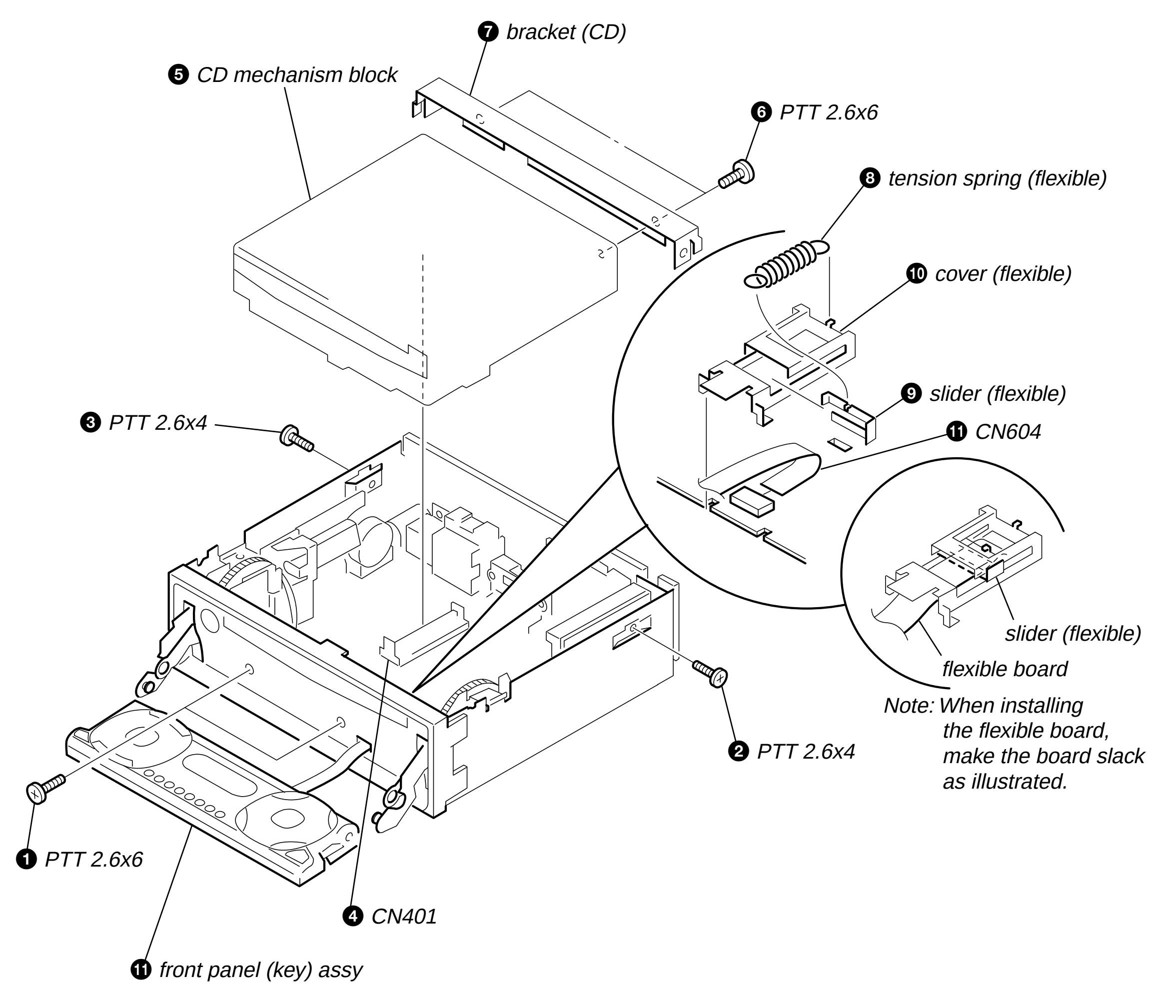
❶ *Turn on the power and open the front panel.*



2-2. FRONT PANEL ASSY (INOPERATIVE)

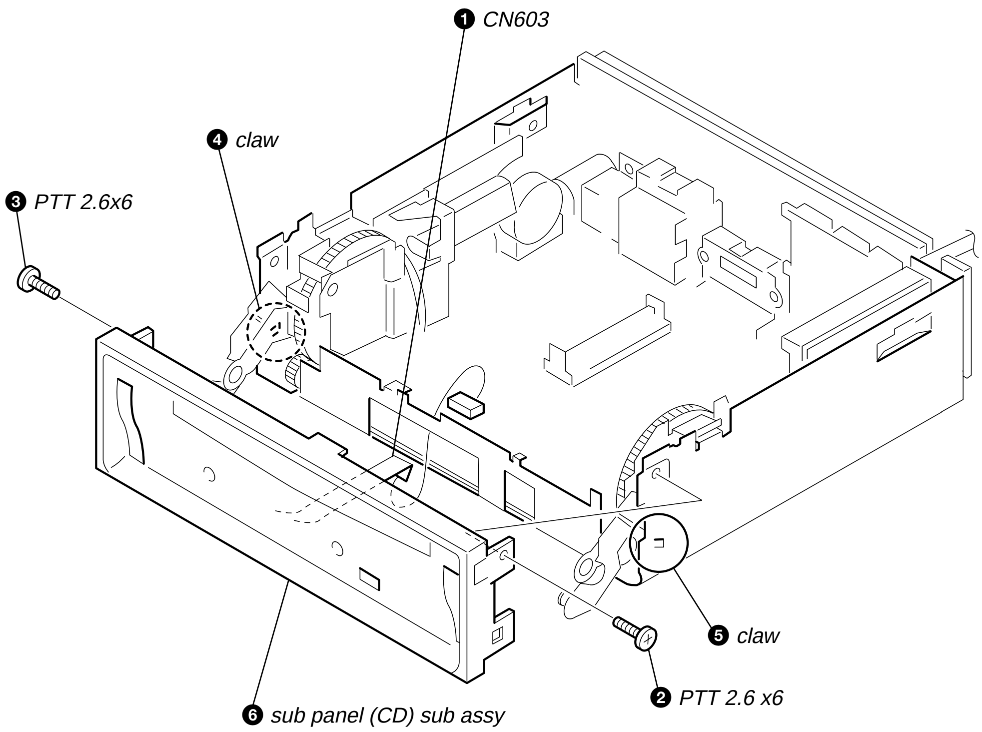


2-3. CD MECHANISM BLOCK, FRONT PANEL (KEY) ASSY



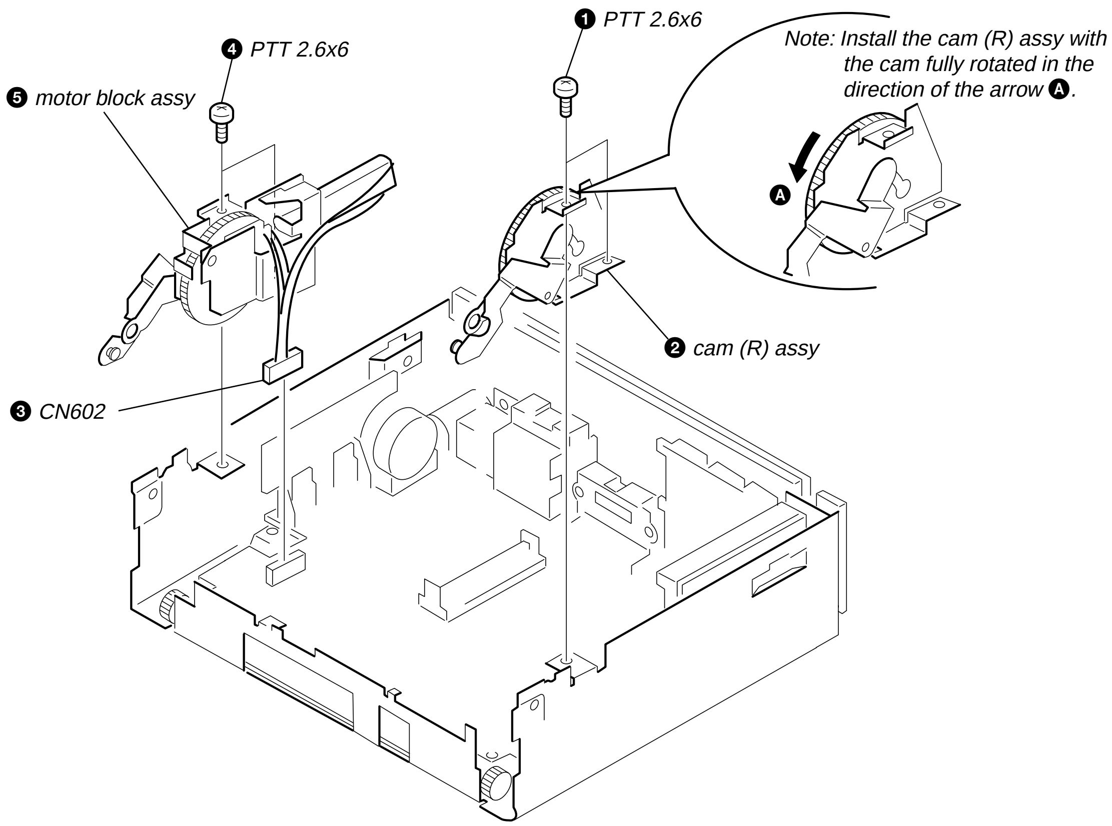
16

2-4. SUB PANEL (CD) SUB ASSY

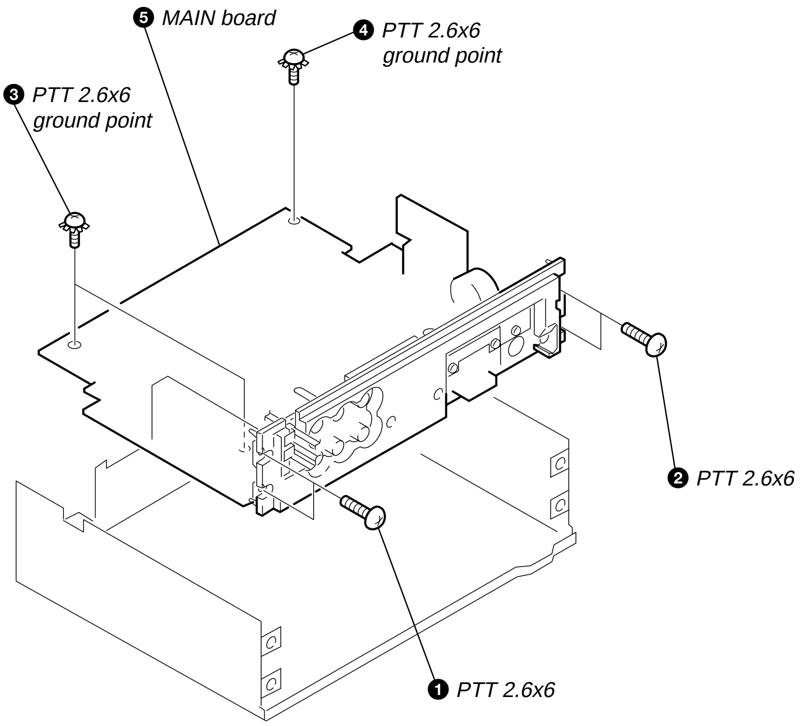


2-5. MOTOR BLOCK ASSY, CAM (R) ASSY

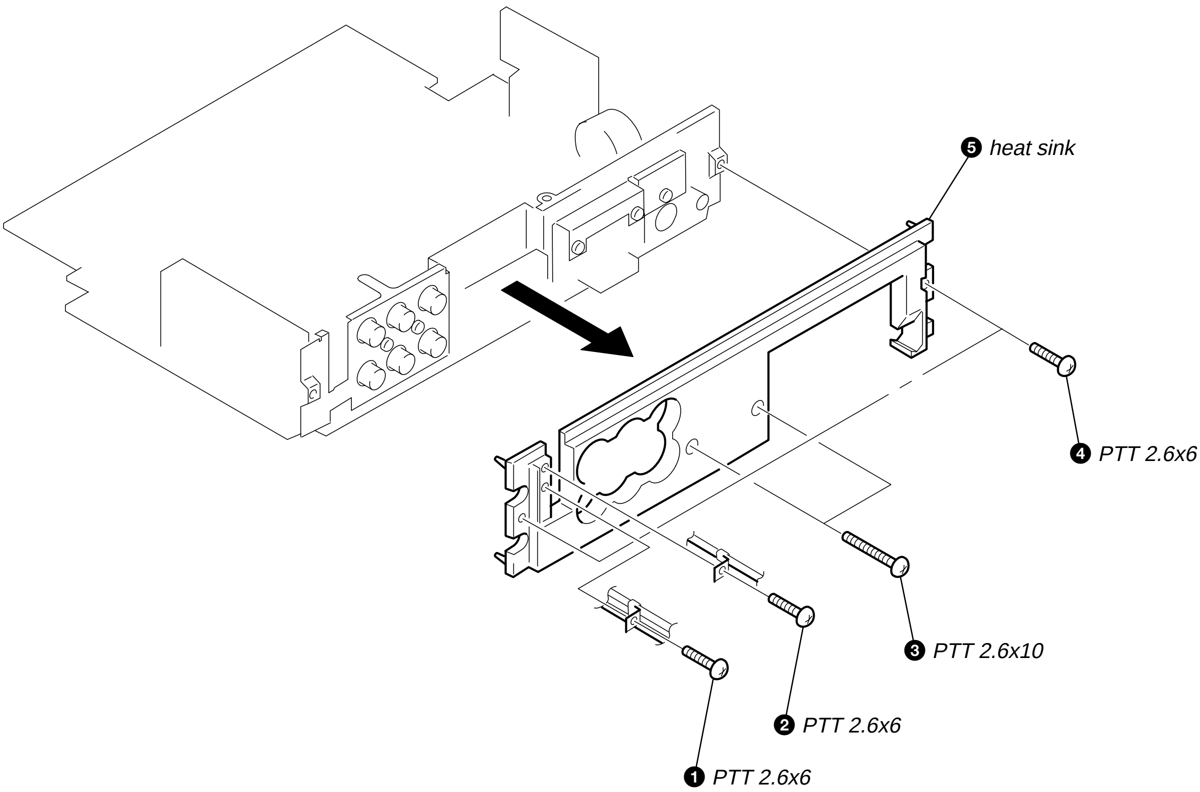
Note : Install the motor block assy and cam (R) assy in this roder.
For phase alignment between cams (L) and (R), see page 22 and 24.



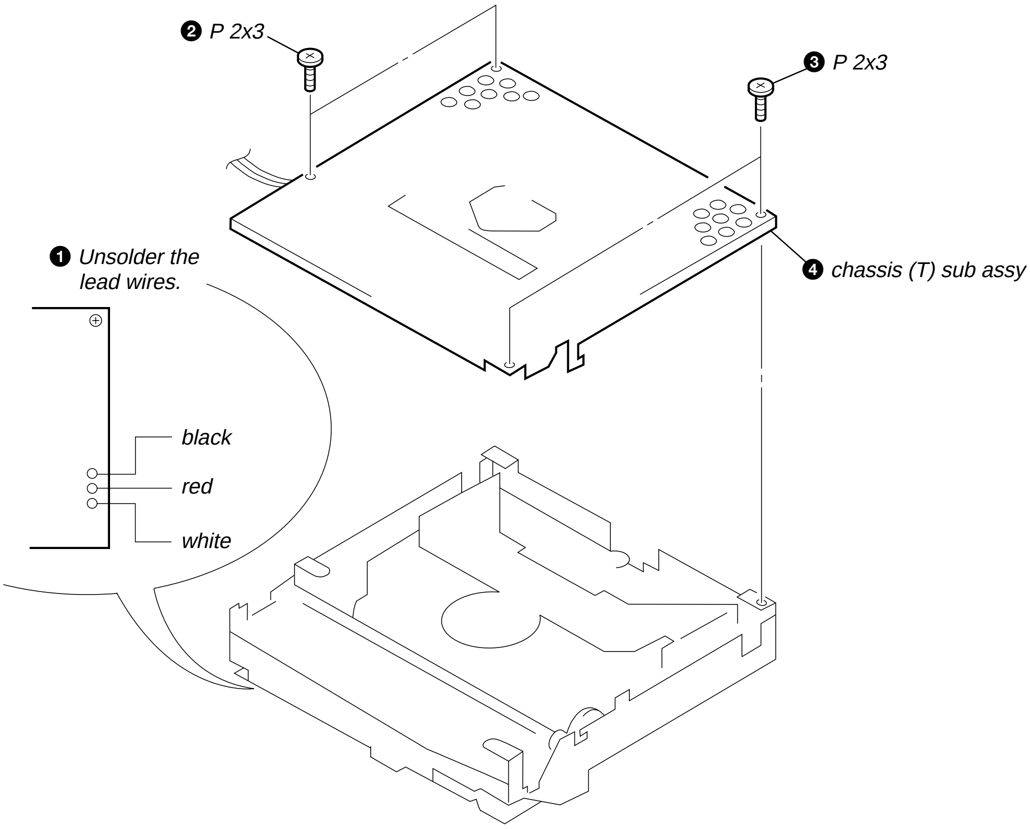
2-6. MAIN BOARD



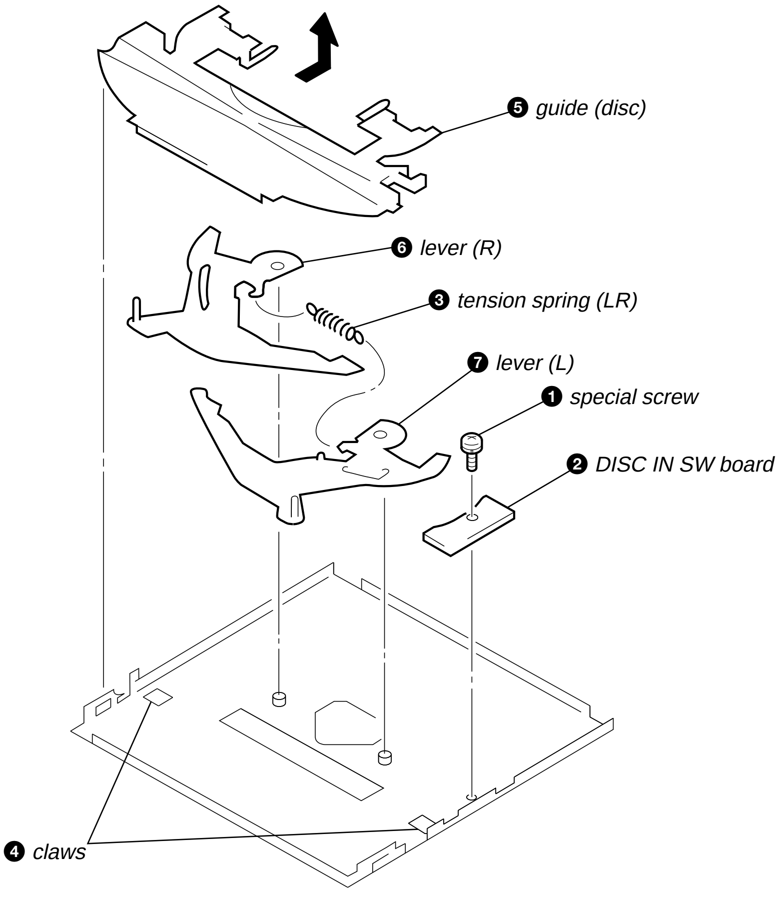
2-7. HEAT SINK



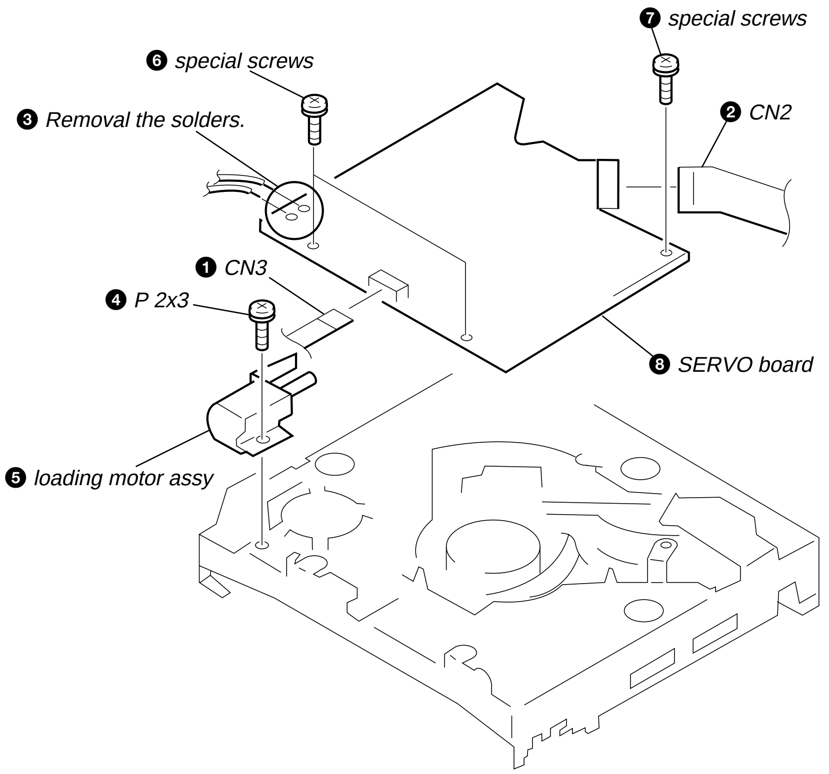
2-8. CHASSIS (T) SUB ASSY



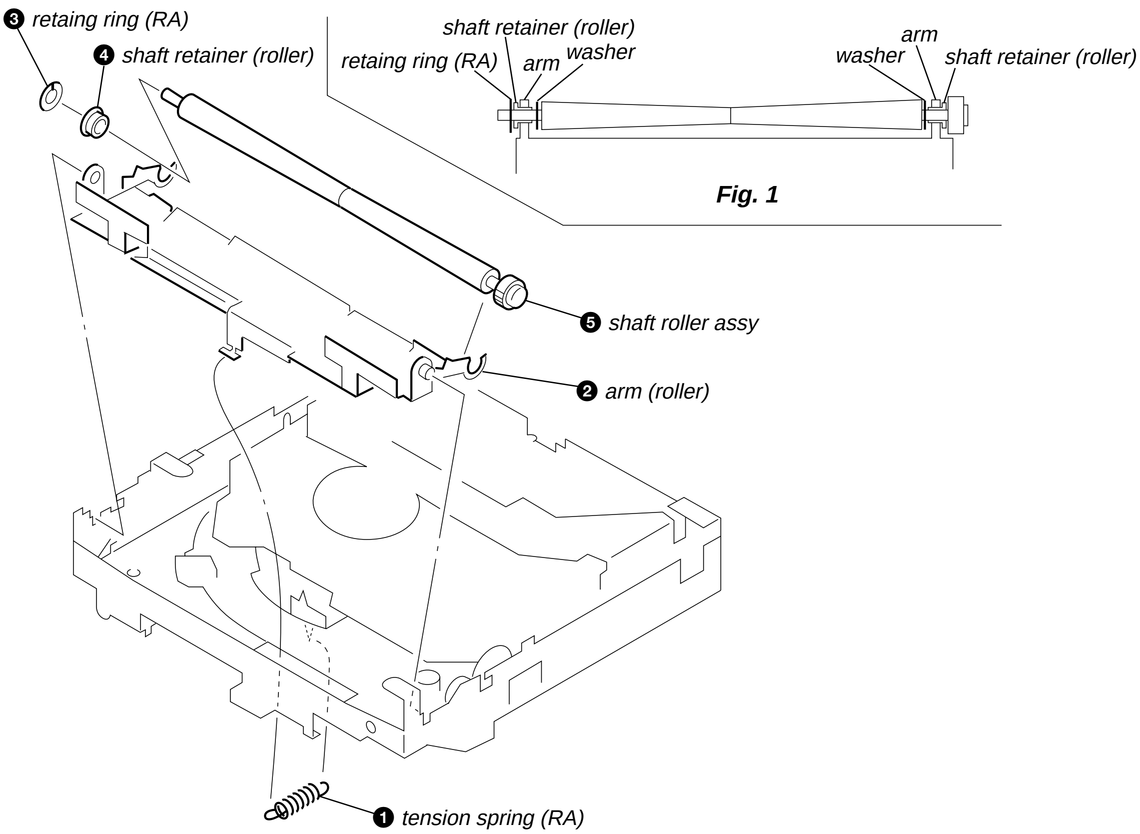
2-9. LEVER SECTION



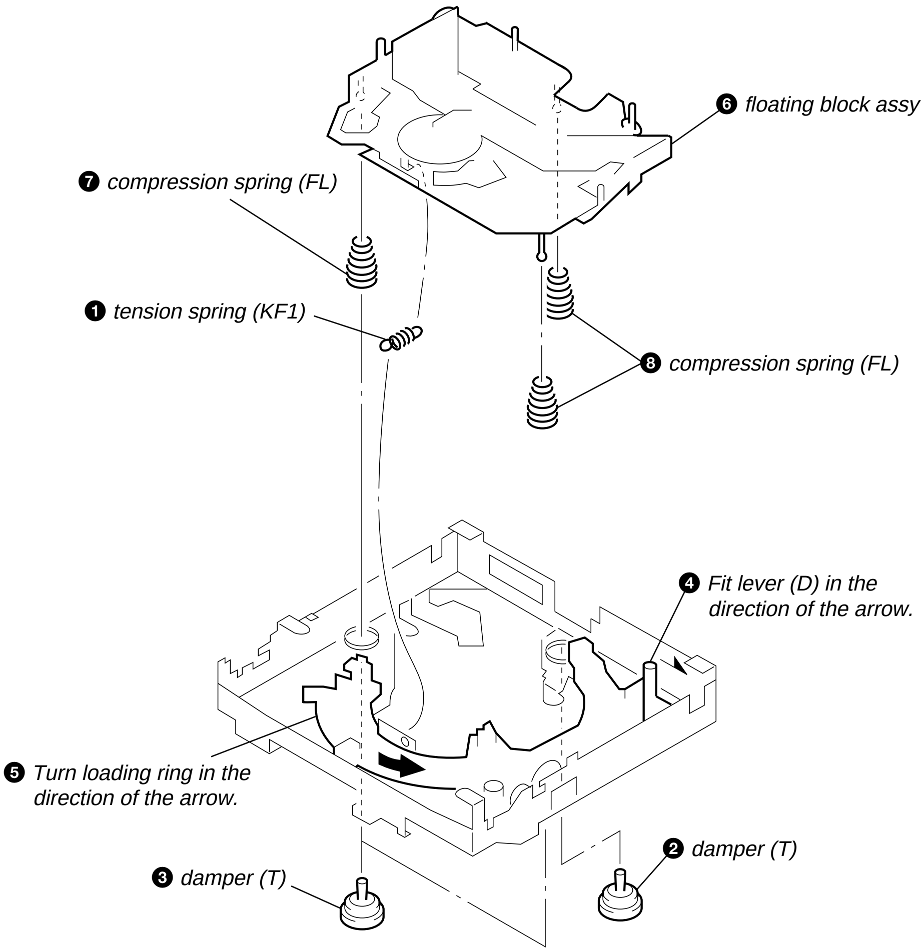
2-10. SERVO BOARD



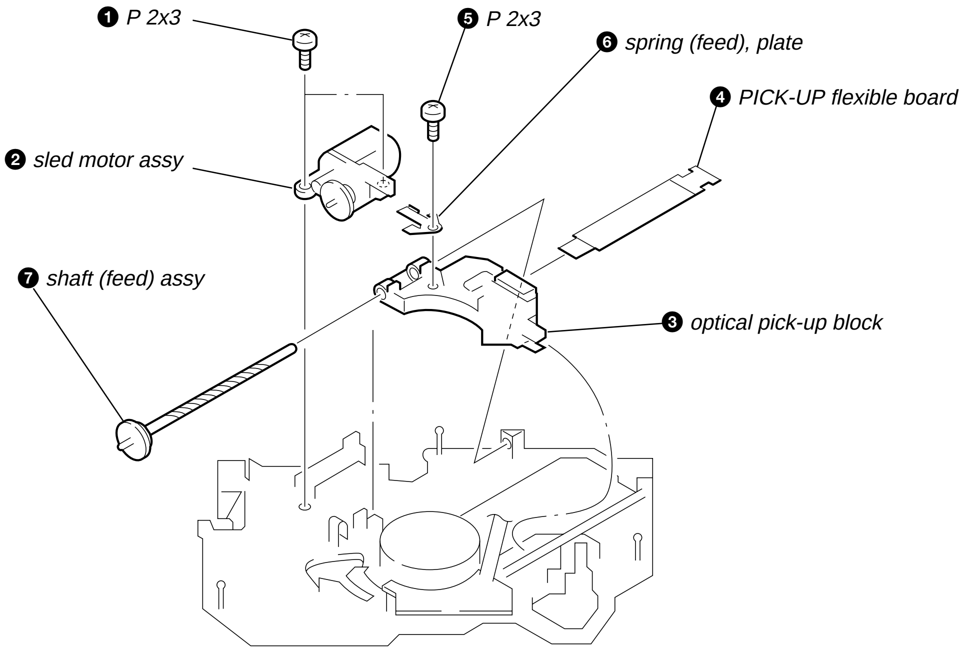
2-11. SHAFT ROLLER ASSY



2-12. FLOATING BLOCK ASSY

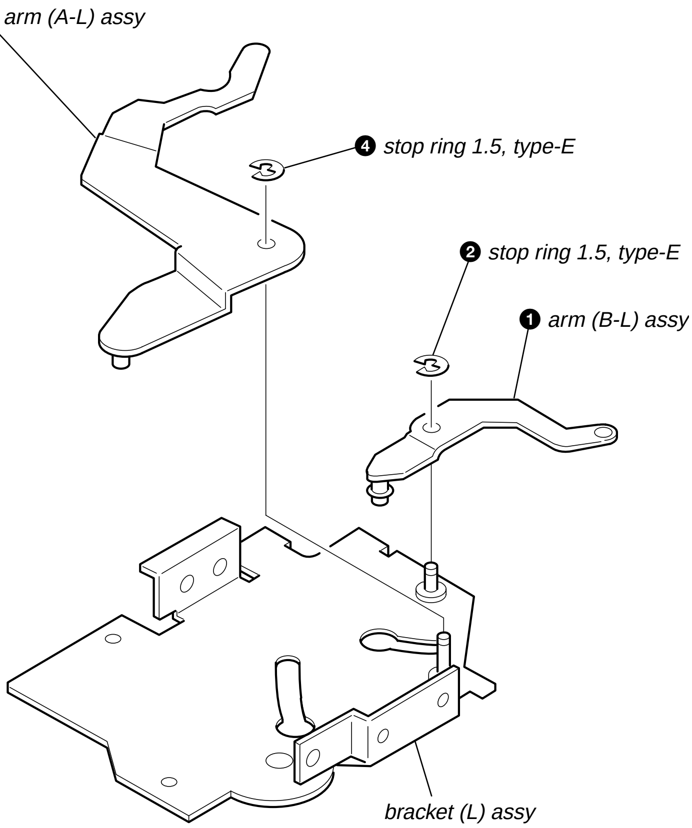


2-13. OPTICAL PICK-UP BLOCK



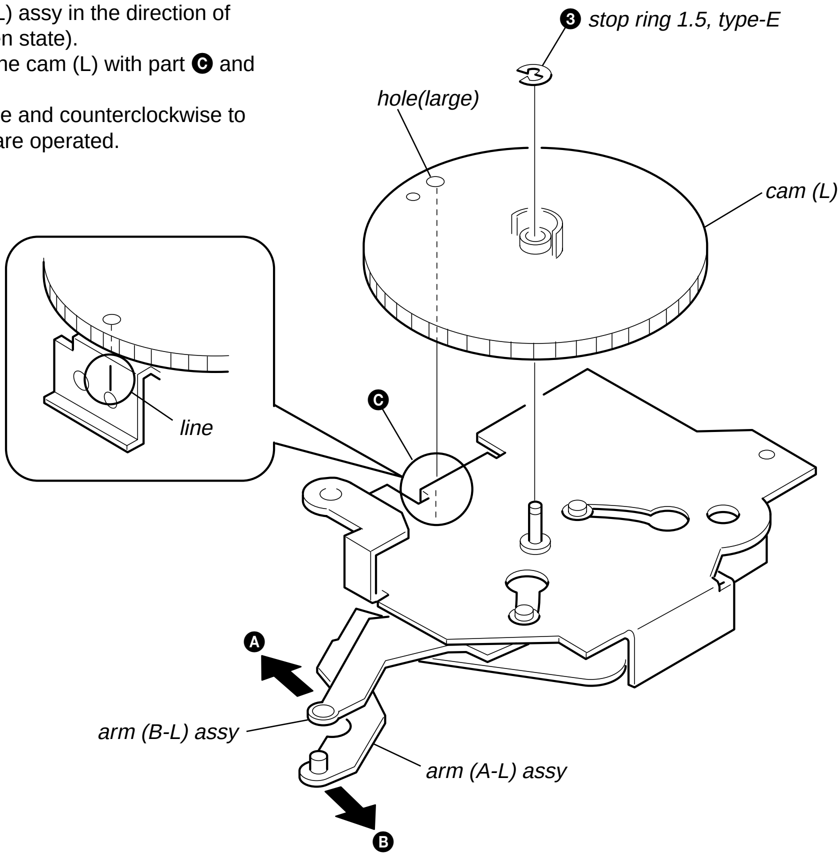
SECTION 3
PHASE ALIGNMENT

3-1. ARM (A-L) ASSY, ARM (B-L) ASSY



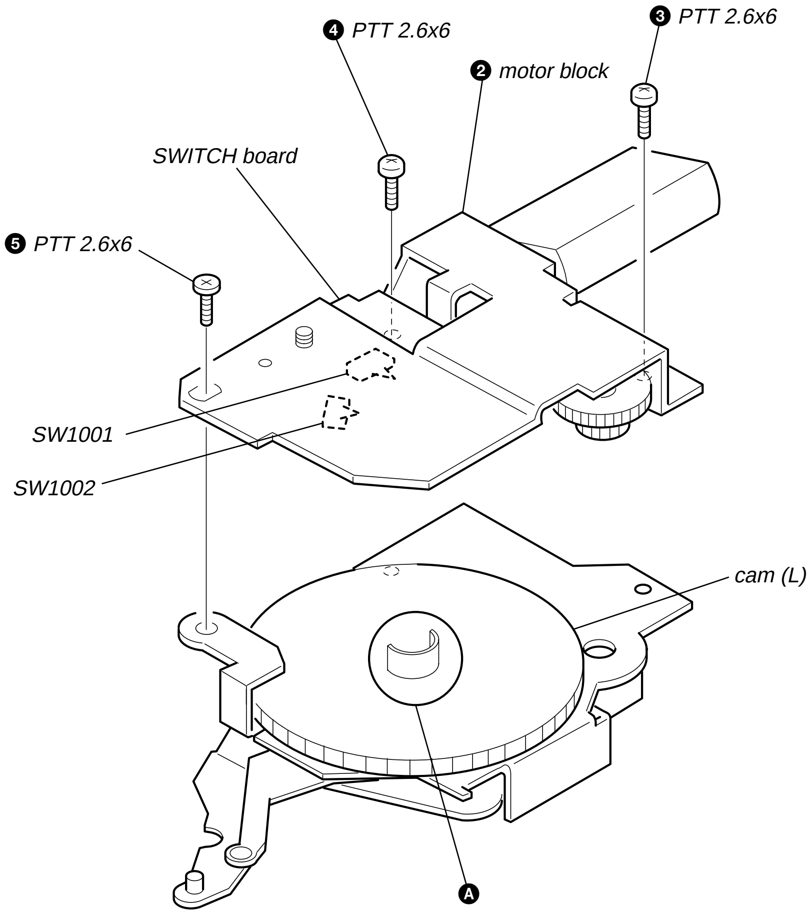
3-2. CAM (L)

❶ Move the arm (B-L) assy in the direction of the arrow Ⓐ and the arm (A-L) assy in the direction of the arrow Ⓑ fully (full open state).
❷ Align the hole (large) on the cam (L) with part Ⓒ and install the cam.
❹ Turn the cam (L) clockwise and counterclockwise to verify that both the arms are operated.



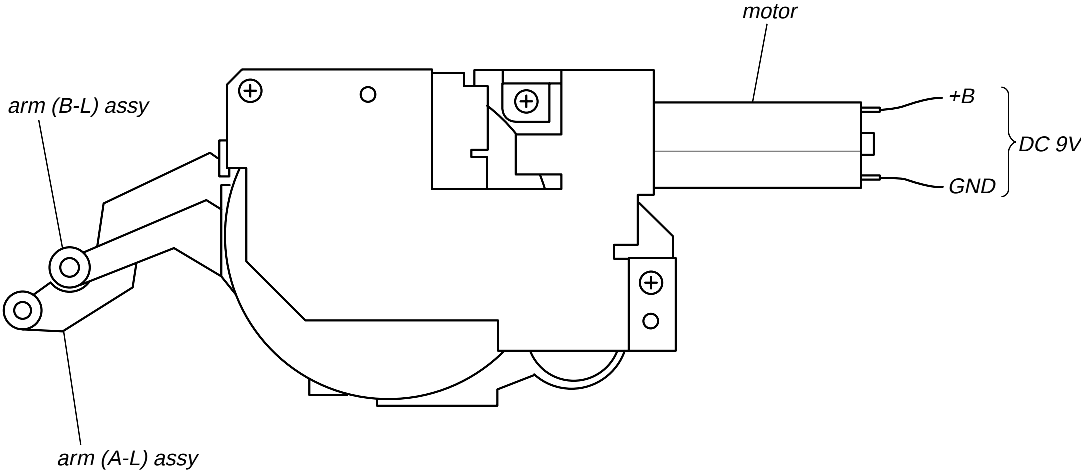
3-3. MOTOR BLOCK

❶ Turn the cam (L) and position the cam so that part Ⓐ does not touch the SWITCH board SW900.

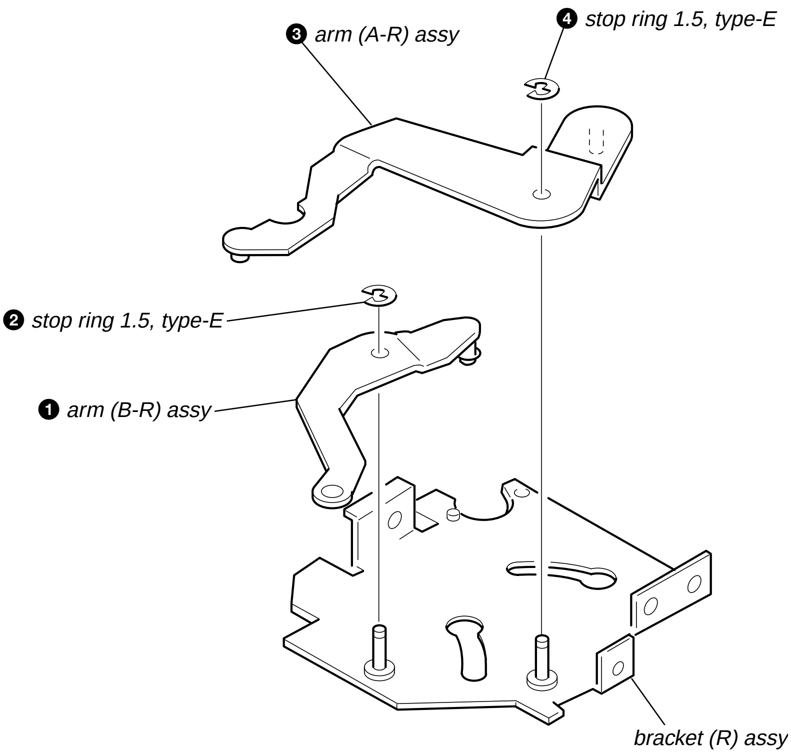


3-4. ALIGNMENT BETWEEN ARM (A-L) ASSY AND ARM (B-L) ASSY

❶ Input 9V DC to the motor terminal until the cam (L) stops rotating.
Take care to avoid overload of the motor.
❷ Verify that the arm (A-L) assy and arm (B-L) assy are positioned as shown below (full open).

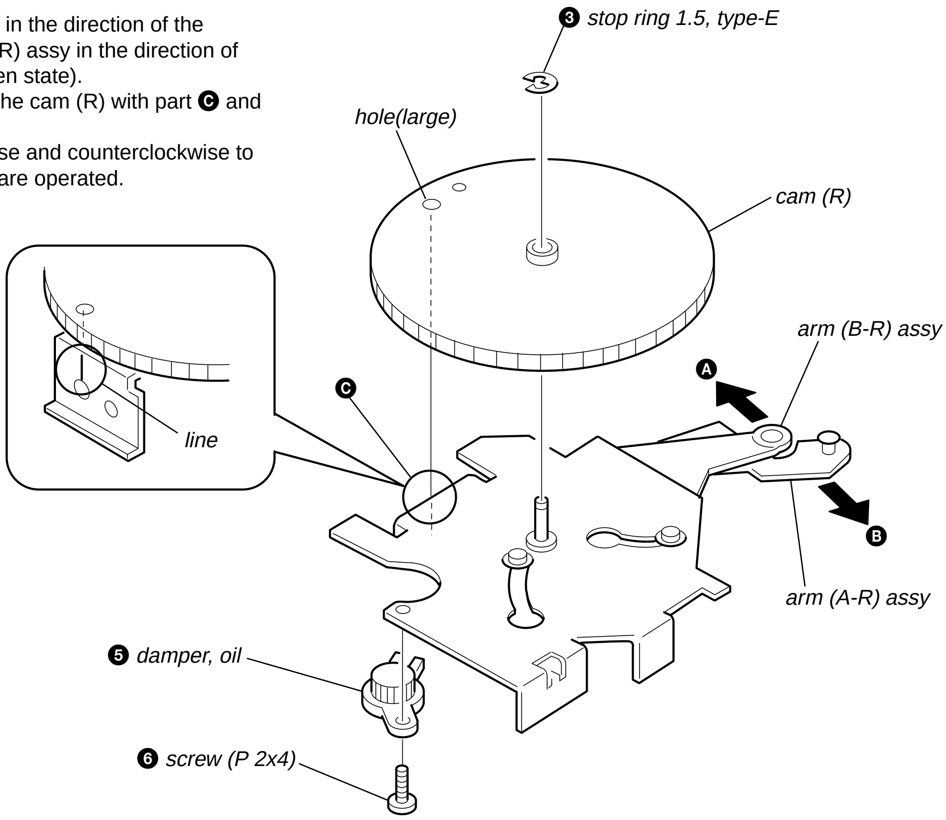


3-5. ARM (A-R) ASSY, ARM (B-R) ASSY



3-6. CAM (R)

❶ Move the arm (B-R) assy in the direction of the arrow Ⓐ and the arm (A-R) assy in the direction of the arrow Ⓑ fully (full open state).
❷ Align the hole (large) on the cam (R) with part Ⓒ and install the cam.
❹ Turn the cam (R) clockwise and counterclockwise to verify that both the arms are operated.



SECTION 4
DIAGRAMS

4-1. IC PIN DESCRIPTIONS

• IC501 CXD2598Q (DIGITAL SERVO, DIGITAL SIGNAL PROCESSOR) (SERVO BOARD)

Pin No.	Pin Name	I/O	Pin Description
1	DVDD	—	Digital power supply pin
2	DVSS	—	Digital ground
3	SOUT	O	Servo brock serial data output (Not used.)
4	SOCK	O	Servo brock serial data read clock output (Not used.)
5	XOLT	O	Servo brock serial data latch output (Not used.)
6	SQSO	O	Sub Q 80 bit, PCM peak and level data output. CD TEXT data output
7	SQCK	I	Clock input from SQSO read out.
8	SCSY	I	Fixed at “L”.
9	SBSO	O	Serial output of sub-P to W. (Not used.)
10	EXCK	I	Clock input from SBSO read out. (Fixed at “L”)
11	XRST	I	System reset (“L”: Reset)
12	STSM	I	System mute input (Fixed at “L”)
13	DATA	I	Serial data input from CPU.
14	XLAT	I	Latch input from CPU. Latch serial data at the falling edge.
15	CLOK	I	Serial data transfer clock input from CPU.
16	SENS	O	SENS output for CPU.
17	SCLK	I	Clock input from SENS serial data read.
18	ATSK	I/O	Input/output for anti-shock.
19	WFCK	O	WFCK (Write Flame Clock) output (Not used.)
20	XUGF	O	XUGF output (Not used.)
21	XPCK	O	XPCK output (Not used.)
22	GFS	O	GFS output
23	C2PO	O	C2PO output (Not used.)
24	SCOR	O	“H” output at either detection, sub code sync S0 or S1.
25	C4M	O	4.2336 MHz output (Not used.)
26	WDCK	O	Word clock output f=2Fs (Not used.)
27	COUT	I/O	Track number count signal input/output (Not used.)
28	MIRR	I/O	Mirror signal input/output (Not used.)
29	DVSS	—	Digital ground
30	DVDD	—	Digital power supply pin
31	DFCT	I/O	Diffect signal input/output (Not used.)
32	FOK	I/O	Focus OK signal input/output
33	PWM1	I	External control input of spindle motor.
34	LOCK	I/O	Lock signal input/output
35	MDP	O	Servo control output of spindle motor.
36	SSTP	I	Disc most inner track detection signal input
37	FSTIO	I/O	2/3 frequency division input/output of pins ㊱ and ㊲. (Not used.)
38	SFDR	O	Sled drive output
39	SRDR	O	Sled drive output
40	TFDR	O	Tracking drive output
41	TRDR	O	Tracking drive output
42	FFDR	O	Focus drive output
43	FRDR	O	Focus drive output
44	DVDD	—	Digital power supply pin
45	DVSS	—	Digital ground
46	TEST	I	Test pin (Fixed at “L”.)
47	TES1	I	Test pin (Fixed at “L”.)
48	XTSL	I	X’tal select input (“L”: 16.9344 MHz, “H”: 33.8688 MHz)
49	VC	I	Center voltage input
50	FE	I	Focus error signal input
51	SE	I	Sled error signal input

Pin No.	Pin Name	I/O	Pin Description
52	TE	I	Tracking error signal input
53	CE	I	Center servo analog input
54	RFDC	I	RF signal input
55	ADIO	O	Test pin (Not used.)
56	AVSSO	—	Analog ground
57	IGEN	I	Constant current input from OP amplifier.
58	AVDDO	—	Analog ground
59	ASYO	O	EFM full-swing output (“L”: VSS, “H”: VDD)
60	ASYI	I	Asymmetry comparate voltage input
61	RFAC	I	EFM signal input
62	AVSS3	—	Analog ground
63	CLTV	I	VCO control voltage input from master.
64	FILO	O	Filter output for master PLL. (slave=digital PLL)
65	FILI	I	Filter input from master PLL.
66	PCO	O	Charge pump output for master PLL.
67	AVDD3	—	Analog power supply pin
68	BIAS	I	Asymmetry circuit constant current input
69	VCTL	I	VCO2 control input from wideband EFM PLL.
70	V16M	O	VCO2 oscillator output for wideband EFM PLL. (Not used.)
71	VPCO	O	Charge pump output for wideband EFM PLL. (Not used.)
72	DVSS	—	Digital ground
73	MD2	I	Digital out ON/OFF control input (“L”: OFF, “H”: ON)
74	DOUT	O	Digital out output
75	ASYE	I	Asymmetry circuit ON/OFF input (“L”: OFF, “H”: ON)
76	DVDD	—	Digital power supply pin
77	LRCK	O	D/A interface LR clock output (f=Fs)
78	LRCKI	I	D/A interface LR clock input
79	PCMD	O	D/A interface serial data output (2’s COMP, MSB fast)
80	PCMD	I	D/A interface serial data input (2’s COMP, MSB fast)
81	BCK	O	D/A interface bit clock output
82	BCKI	I	D/A interface bit clock input
83	EMPH	O	Emphasis ON/OFF signal output
84	EMPHI	I	Emphasis ON/OFF signal input (“H”: ON, “L”: OFF)
85	XVDD	—	Power supply for master clock.
86	XTAI	I	X’tal oscillator input from master clock (16.9344 MHz).
87	XTAO	O	X’tal oscillator output for master clock (16.9344 MHz). (Not used.)
88	XVSS	—	Ground pin for master clock.
89	AVDD1	—	Analog power supply pin
90	AOUT1	O	Lch analog output (Not used.)
91	AIN1	I	Lch OP amplifier input (Not used.)
92	LOUT1	O	Lch LINE output (Not used.)
93	AVSS1	—	Analog ground
94	AVSS2	—	Analog ground
95	LOUT2	O	Rch LINE output (Not used.)
96	AIN2	I	Rch OP amplifier input (Not used.)
97	AOUT2	O	Rch analog output (Not used.)
98	AVDD2	—	Analog power supply pin
99	RMUT	O	Rch “0” detect Flug (Not used.)
100	LMUT	O	Lch “0” detect Flug (Not used.)

• IC5 CXP84640-072Q (CD SYSTEM CONTROL) (SERVO BOARD)

Pin No.	Pin Name	I/O	Pin Description
1	ITRPT	—	Not used in this set.
2, 3	—	—	Not used in this set.
4, 5	NCO	—	Not used in this set.
6	OPEN	I	Front panel open detection input
7	CLOSE	O	Front panel close control output
8	LINKOFF	I	Bus interface link input
9	NCO	—	Not used in this set.
10	$\overline{\text{D SW}}$	I	Down switch input (SW1)
11	SSTP	I	Limit switch input (SW4)
12, 13	NCO	—	Not used in this set.
14, 15	—	—	Not used in this set.
16	EMPH O	O	De-emphasis ON/OFF control output
17	CDMON	O	CD mechanism deck power control output
18	CD ON	O	CD power control output
19	A MUT	O	System attenuate control output
20	$\overline{\text{LD ON}}$	O	Laser power ON/OFF control output
21	$\overline{\text{CD RST}}$	O	CD system reset output
22	HOLD	O	Hold switch output
23	AGC CONT	O	AGC control output
24	—	—	Not used in this set.
25	PH3	I	Not used in this set.
26	$\overline{\text{TSTIN0}}$	I	Not used in this set.
27	$\overline{\text{TSTIN1}}$	I	Not used in this set.
28	$\overline{\text{TST.CLV}}$	I	Not used in this set.
29	NCO	—	Not used in this set.
30	$\overline{\text{RESET}}$	I	System reset input (“L”=Reset)
31	X IN	I	X’tal oscillator input from system clock. (10 MHz)
32	$\overline{\text{X OUT}}$	O	X’tal oscillator output for system clock. (10 MHz)
33	GND	—	Analog ground
34	$\overline{\text{XT OUT}}$	O	Not used in this set.
35	XT IN	I	Not used in this set.
36	AVSS	—	A/D converter ground
37	AVREF	I	A/D converter reference voltage input
38	TEP L	I	Not used in this set.
39	TEP H	I	Not used in this set.
40	SLED–	I	Sled drive input
41	PH2	I	Not used in this set.
42	SEK/SMET	I	Fixed at “H” in this set.
43	GFS/MNT2 SEL	I	Fixed at “H” in this set.
44	SC-JIG ON/OFF	I	Fixed at “H” in this set.
45	SCLK	O	CD-TEXT data read clock output
46	LOCK	I/O	Lock signal input/output
47	—	—	Not used in this set.
48	SCK2	O	Sub Q read clock output
49	SI2	I	Sub Q 80 bit, PCM peak and level data 16 bit input.
50	—	—	Not used in this set.
51	BUS CLK	I/O	Bus system serial clock input/output
52	BUS SI	I	Bus system serial interface input
53	BUS SO	O	Bus system serial interface output
54	F OK	I	Focus OK signal input
55	GFS	I	GFS signal detection input
56	TEST MODE	I	Fixed at “H” in this set.

Pin No.	Pin Name	I/O	Pin Description
57	SENS	I	SENS signal input
58	—	—	Not used in this set.
59	—	—	Not used in this set.
60	BU.IN	I	Back-up power detection input
61	$\overline{\text{BUSON}}$	I	Bus on control input
62	$\overline{\text{IN SW}}$	I	Disc in switch input (SW3)
63	$\overline{\text{SELF SW}}$	I	Self switch input (SW2)
64	SCOR	O	Sub-code sync output
65	CD-CKO	O	CD signal process serial clock output
66	LM LOD	O	Loading motor control output
67	CD DATA	O	CD signal process serial data output
68	CD-XLAT	O	CD signal process serial data latch output
69	LM-EJ	O	Loading motor control output
70	DRV-OE	O	Focus/tracking coil/sled motor control output
71	MD2	O	Digital out ON/OFF control output (“L”: OFF, “H”: ON)
72	VDD	—	Power supply pin
73	NIH	I	Fixed at “H” in this set.
74	V/Z	I	Fixed at “H” in this set.
75	PH1	I	Not used in this set.
76	—	—	Not used in this set.
77	DOUT-SEL	I	Fixed at “H” in this set.
78 – 80	—	—	Not used in this set.

• IC501 MB90574BPMT-G-321-BND (SYSTEM CONTROL) (MAIN BOARD) (US MODEL)
• IC501 MB90574BPMT-G-322-BND (SYSTEM CONTROL) (MAIN BOARD) (AEP, UK, E MODEL)

Pin No.	Pin Name	I/O	Pin Description
1 – 3	(NCO)	O	Not used. (Open)
4	SP LATCH	O	Spectrum analyzer data latch signal
5	ATT	O	System mute signal
6	SYS RST	O	System reset signal
7	(NCO)	O	Not used. (Open)
8	VCC	—	Power supply pin (+5 V)
9	(NCO)	O	Not used. (Open)
10	E2P SIO	I/O	Tuner unit EEPROM BUS serial data input/output
11	E2P CKO	I/O	Tuner unit EEPROM BUS serial clock input/output
12	FLS SI	I	Flash CPU write-in data input
13	FLS SO	O	Flash CPU write-in data output
14	BUS ON	O	BUS ON signal
15	BEEP	O	Beep signal
16	TEL ATT	I	Telephone mute signal
17	UNI SI	I	SONY BUS serial data input
18	UNI SO	O	SONY BUS serial data output
19	UNI CKO	O	SONY BUS serial clock output
20 – 23	(NCO)	O	Not used. (Open)
24	SIRCS	I	Wireless remote data input
25	DSP SI	I	DSP serial data input
26	DSP SO	O	DSP serial data output
27	DSP CKO	O	DSP serial clock output
28	DSP PLL	O	DSP PLL clock control signal
29	DSP MST	O	DSP master/slave control signal
30	(NCO)	O	Not used. (Open)
31	VOL ATT	O	Electronic volume mute signal
32	TU ATT	O	Not used. (Open)
33	VSS	—	Ground
34	C	—	Not used. (Open)
35	DSP LAT	O	DSP latch signal
36	DSP RST	O	DSP reset signal
37	SHIFT	O	OSC frequency shift signal for DC/DC conv.
38	DVCC	—	Power supply pin (+5 V)
39	DVSS	—	Ground
40	FP CTRL	O	OPEN/CLOSE motor voltage control signal
41	(NCO)	O	Not used. (Open)
42	AVCC	—	Power supply pin (+5 V)
43	AVRH	—	Power supply pin (+5 V)
44	AVRL	—	Ground
45	AVSS	—	Ground
46	KEY IN0	I	Key input 0
47	KEY IN1	I	Key input 1
48	RC IN0	I	Rotary commander input 0
49	(NCO)	O	Not used. (Open)
50	QUALITY	I	Noise detection signal
51	(NCO)	O	Not used. (Open)
52	MPTH	I	Tuner multi path detection signal
53	VSM	I	S-meter voltage detection signal
54	VCC	—	Power supply pin (+5 V)
55	STBY	O	Power amplifier drive signal
56	NS MASK	O	Noise detection ON/OFF control signal

Pin No.	Pin Name	I/O	Pin Description
57	DDC ON	O	DC/DC converter power control signal
58	CD EJECT OK	O	CD eject control signal
59	CD OPEN REQ	I	Front panel open request signal
60	(NCO)	O	Not used. (Open)
61	OPEN KEY	I	OPEN key detection signal
62	NOSE SW	I	Nose SW detection signal
63	VSS	—	Ground
64	DETACH SW	I	Detach SW detection signal
65	PWM	I	Oscillation frequency count input
66 – 68	(NCO)	O	Not used. (Open)
69	FLASH W	I	Flash write-in signal
70	I2C SIO	I/O	I2C serial data input/output
71	I2C CKO	I/O	I2C serial clock input/output
72	RC IN1	I	Rotary commander input 1
73	X1A	—	Crystal oscillator (32.768 kHz)
74	X0A	—	Crystal oscillator (32.768 kHz)
75	DAVN	I	RDS data acquisition detect signal
76	CDON IN	I	CD mechanism power control signal
77	BU IN	I	Back-up power detection signal
78	DSP READY	I	DSP ready signal
79	KEY ACK	I	Key acknowledge signal
80	AD ON	O	A/D converter power control signal
81	ACC IN	I	Accessory key ON signal
82	FLS PWON	O	Flash power ON control signal
83	PW ON	O	Audio circuit power ON control signal
84	TEST IN	I	Test mode initial setting detection signal
85	RAM BU	I	RAM reset detection signal
86	HSTX	I	Hardware standby input
87	MD2	I	Connecting to ground in this set.
88	MD1	I	Connecting to VCC in this set.
89	MD0	I	Connecting to VCC in this set.
90	RSTX	I	Reset input
91	VSS	—	Ground
92	X0	—	Crystal oscillator (3.68 MHz)
93	X1	—	Crystal oscillator (3.68 MHz)
94	VCC	—	Power supply pin (+5 V)
95	ILL IN	I	Illumination dimmer control signal
96	I DET	I	OPEN/CLOSE motor abnormal current detection
97	MOT –	O	OPEN/CLOSE motor control signal
98	MOT +	O	OPEN/CLOSE motor control signal
99	CLOSE SW	I	Close SW detection signal
100	OPEN SW	I	Open SW detection signal
101	CENT SW	I	Cent SW detection signal
102	(NCO)	O	Not used. (Open)
103	CDMD SEL	I	CD/MD selector signal
104	DEST SEL1	I	Destination selector signal 1
105	DEST SEL2	I	Destination selector signal 2
106	BOOT	O	Display CPU write-in control signal
107	(NCO)	O	Not used. (Open)
108	DSP ON	O	DSP power control signal
109	SENS ON	O	Not used. (Open)
110	EMPH IN	I	Emphasis input
111	PACK IN	I	Pack detection signal

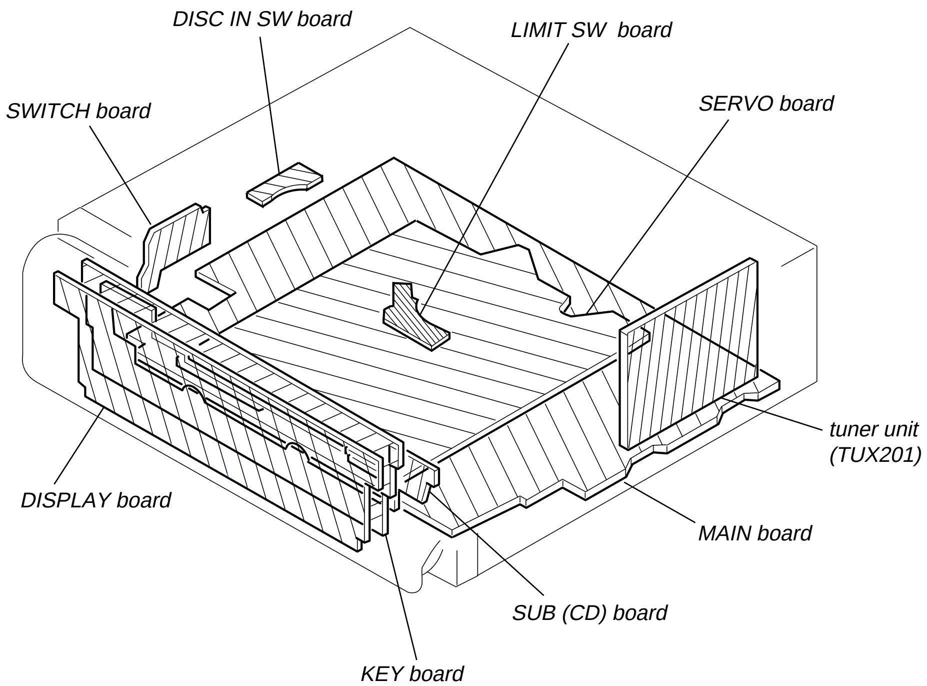
Pin No.	Pin Name	I/O	Pin Description
112	4V SEL	I	4V select control signal
113	(NCO)	O	Not used. (Open)
114	TUN ON	O	Tuner power control signal
115	LED SW1	O	Illumination select control signal 1
116	LED SW2	O	Illumination select control signal 2
117	(NCO)	O	Not used. (Open)
118	(NCO)	O	Not used. (Open)
119	VSS	—	Ground
120	(NCO)	O	Not used. (Open)

• IC702 HD643255A36F (SUB SYSTEM CONTROL) (MAIN BOARD)

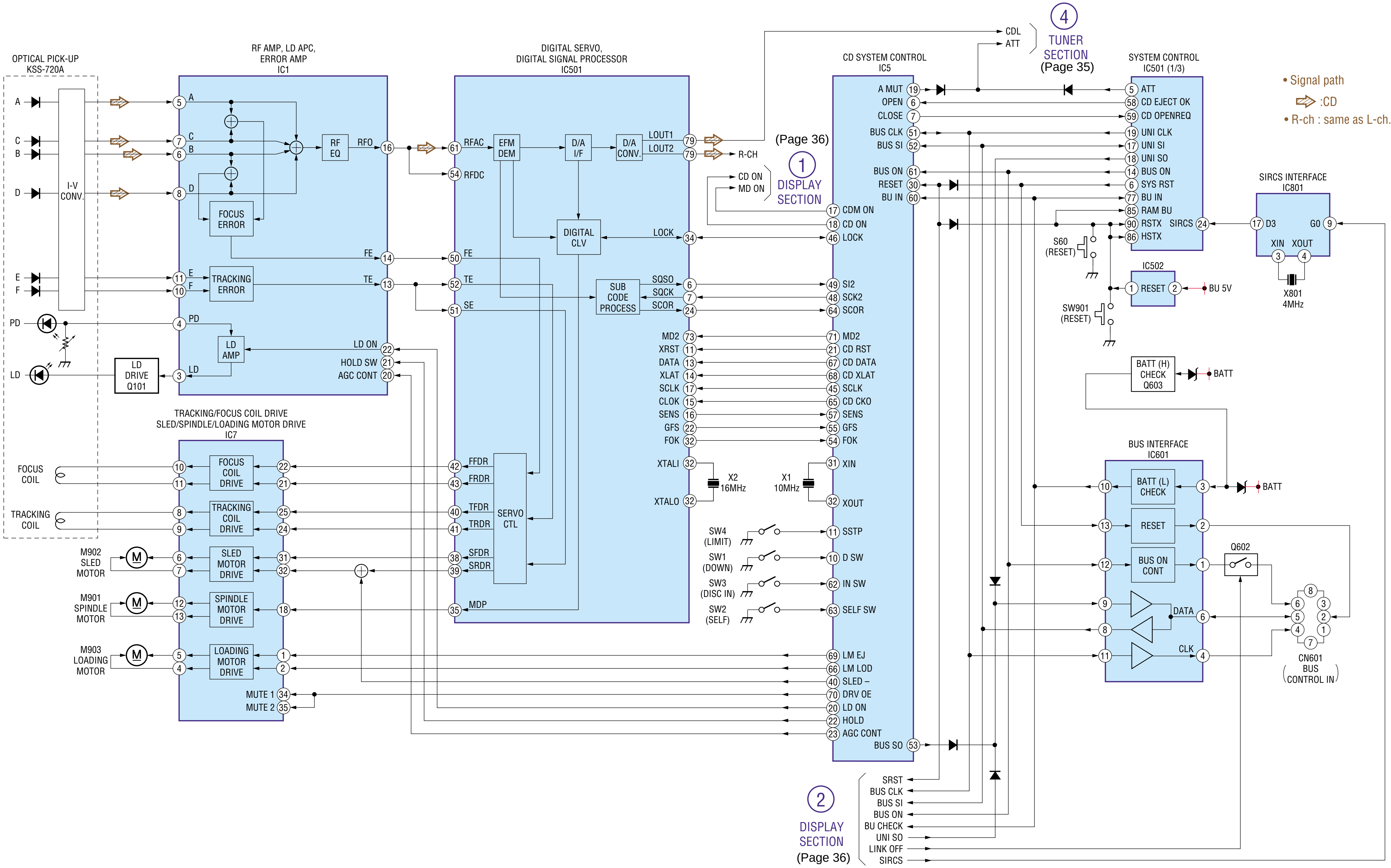
Pin No.	Pin Name	I/O	Pin Description
1	SA CLK	O	Not used. (Open)
2	PG4	O	Not used. (Open)
3	VSS	—	Ground
4	NC	—	Not used. (Open)
5	VCC	—	Power supply pin (+ 5V)
6 – 9	PC0 – PC3	O	Not used. (Open)
10	VSS	—	Ground
11 – 14	PC4 – PC7	O	Not used. (Open)
15 – 18	PB0 – PB3	O	Not used. (Open)
19	VSS	—	Ground
20 – 23	PB4 – PB7	O	Not used. (Open)
24 – 27	PA0 – PA3	O	Not used. (Open)
28	VSS	—	Ground
29 – 31	PA4 – PA6	O	Not used. (Open)
32	SA EN IN	I	Connecting to ground in this set.
33	SPE LAT	I	Spectrum analyzer data latch signal
34	BU IN	I	Back-up power detection signal
35, 36	VSS	—	Ground
37	P65	O	Not used. (Open)
38	BUS ON	I	BUS ON signal
39	VCC	—	Power supply pin (+5 V)
40 – 43	PE0 – PE3	O	Not used. (Open)
44	VSS	—	Ground
45	DSP SEL	I	Spectrum analyzer data select signal
46	LED SW1	I	Illumination select control signal 1
47	LED SW2	I	Illumination select control signal 2
48	PE7	O	Not used. (Open)
49	BU IN	O	Not used. (Open)
50	LINK OFF	O	Link OFF control signal
51	PD2	O	Not used. (Open)
52	ILL ON	O	Illumination power control signal
53	VSS	—	Ground
54 – 56	PD4 – PD6	O	Not used. (Open)
57	BOOT	I	Display CPU write-in control signal
58	VCC	—	Power supply pin (+5 V)
59	P30	O	Not used. (Open)
60	LCD SO/TX	O	LCD driver serial data output
61	SP SI	I	Spectrum analyzer data input
62	RX	I	Flash CPU write-in data input
63	SP CKI	I	Spectrum analyzer clock input
64	LCD CKO	O	LCD driver serial clock output
65	VSS	—	Ground
66	LCD CEO	O	LCD driver chip enable output
67, 68	VSS	—	Ground
69	LCD INH	O	LCD driver inhibit control signal
70	LCD CE1	O	LCD driver chip enable output
71	LCD CE2	O	LCD driver chip enable output
72 – 78	P27 – P21	O	Not used. (Open)
79	FL W	O	Flash write control signal
80	FW E	I	Flash write enable signal
81	SYS RST	I	System reset signal
82	NMI	I	Non maskable interrupt signal

Pin No.	Pin Name	I/O	Pin Description
83	STBY	I	Hardware standby signal
84	VCC	—	Power supply pin (+5 V)
85	XTAL	—	Crystal oscillator (18.432 MHz)
86	EXTAL	—	Crystal oscillator (18.432 MHz)
87	VSS	—	Ground
88	PF7	O	Not used. (Open)
89	VCC	—	Power supply pin (+5 V)
90 – 96	PF6 – PF0	O	Not used. (Open)
97	UNI SO	O	SONY BUS serial data output
98	UNI SI	I	SONY BUS serial data input
99, 100	VSS	—	Ground
101	UNI CKI	I	SONY BUS serial clock input
102	P53	O	Not used. (Open)
103	AVCC	—	Power supply pin (+5 V)
104	VREF	—	Power supply pin (+5 V)
105 – 112	P40 – P47	I	Connecting to ground in this set.
113	AVSS	—	Ground
114	VSS	—	Ground
115 – 122	P17 – P10	O	Not used. (Open)
123	MD0	I	Mode setting 0
124	MD1	I	Mode setting 1
125	MD2	I	Mode setting 2
126 – 128	PG0 – PG2	O	Not used. (Open)

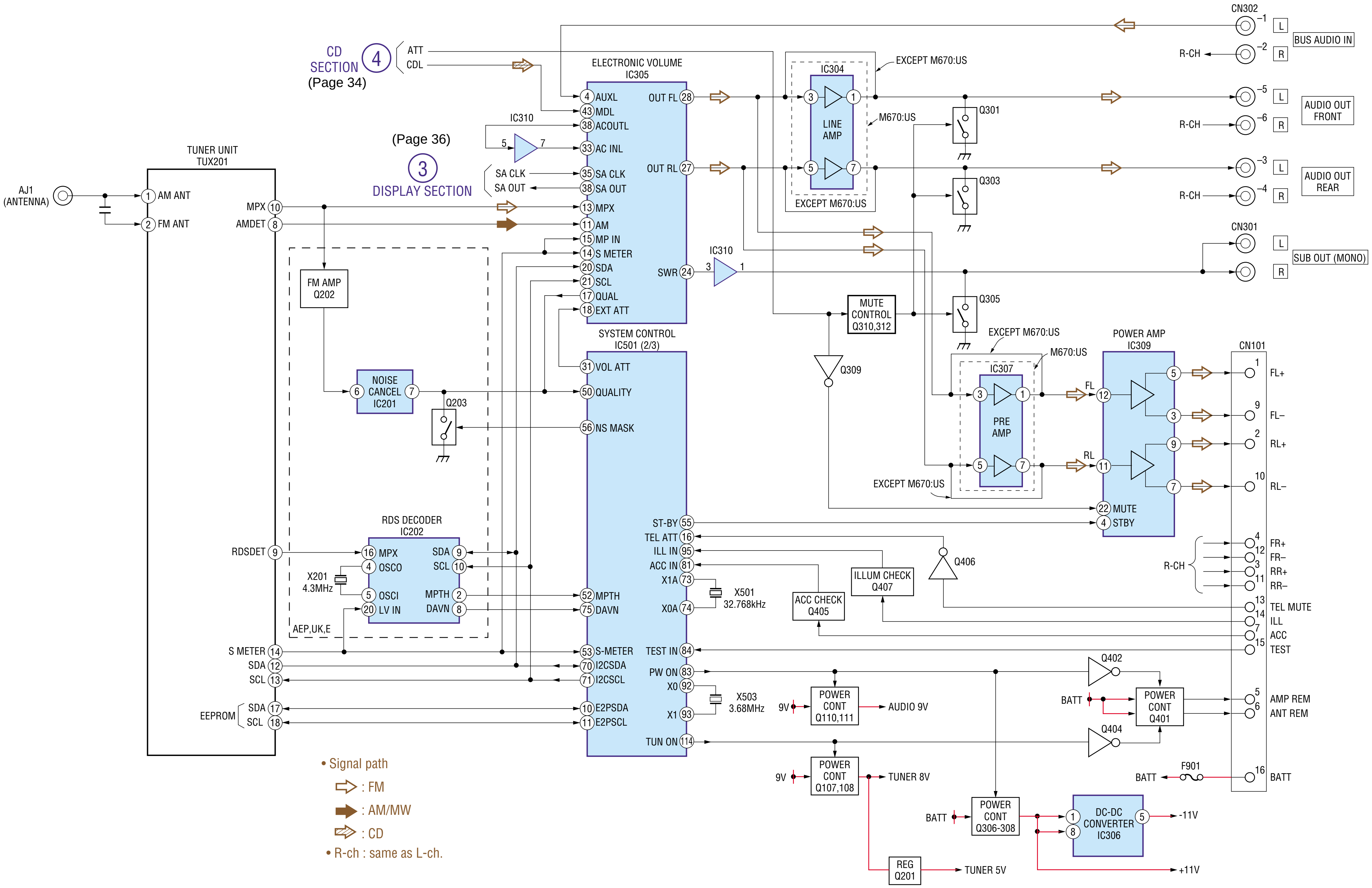
4-2. CIRCUIT BOARDS LOCATION



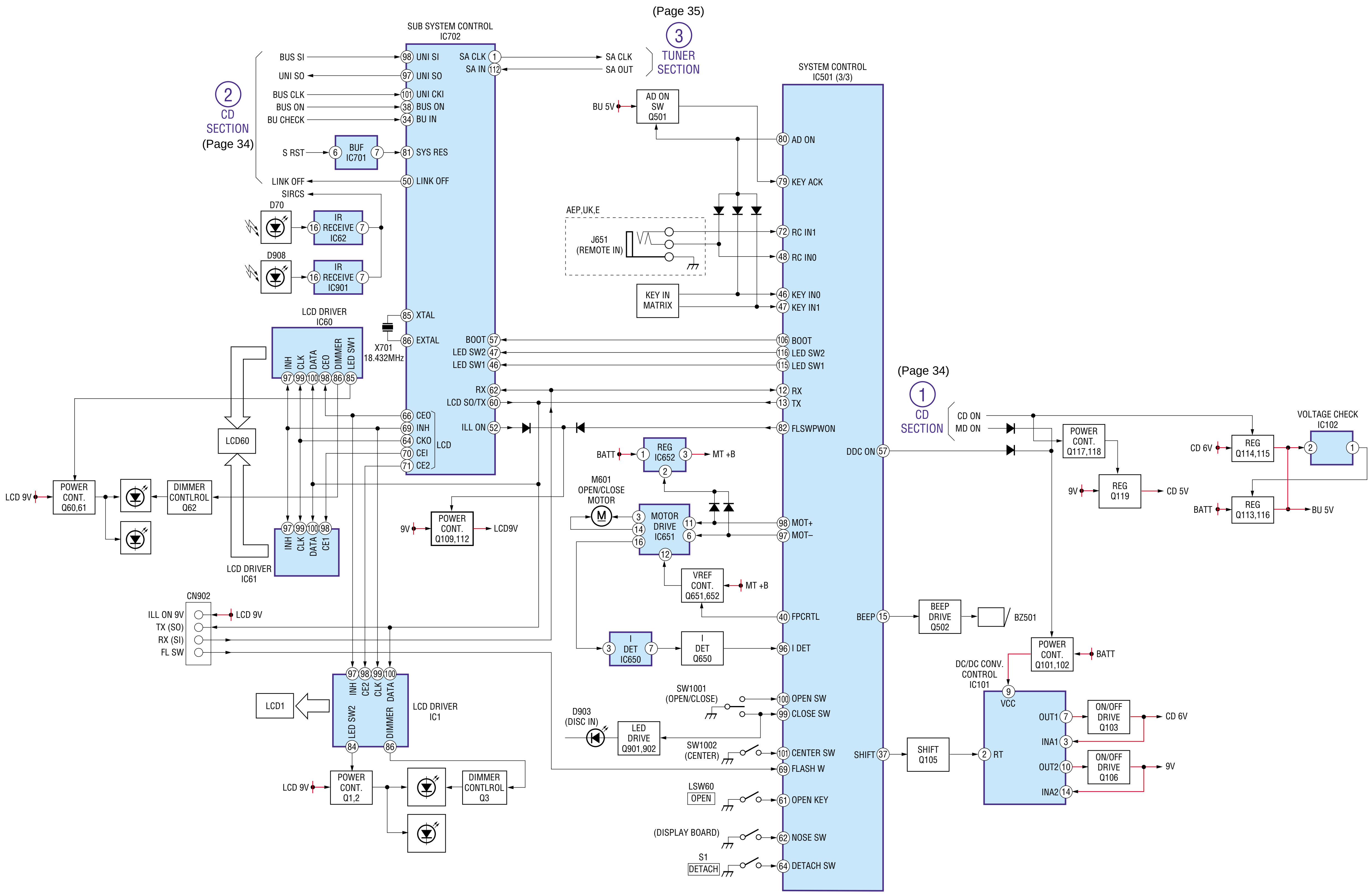
4-3. BLOCK DIAGRAM — CD SECTION —



4-4. BLOCK DIAGRAM — TUNER SECTION —



4-5. BLOCK DIAGRAM — DISPLAY SECTION —



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

for schematic diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.
- ▭ : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

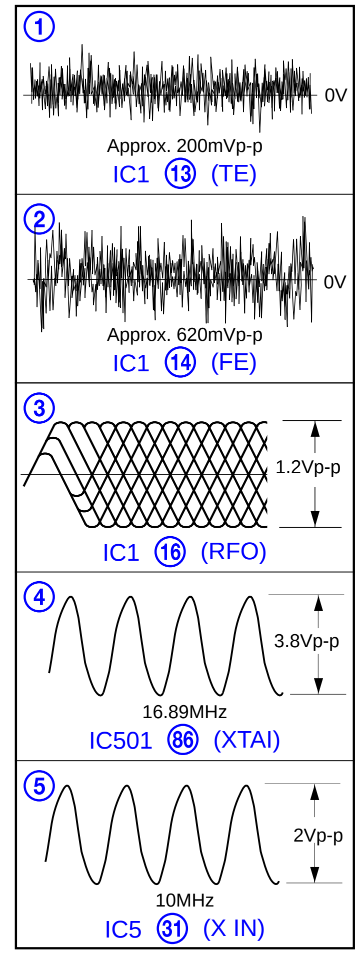
- ▬ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - ⇨ : FM
  - ➡ : AM/MW
  - ⇨ : CD

for printed wiring boards:

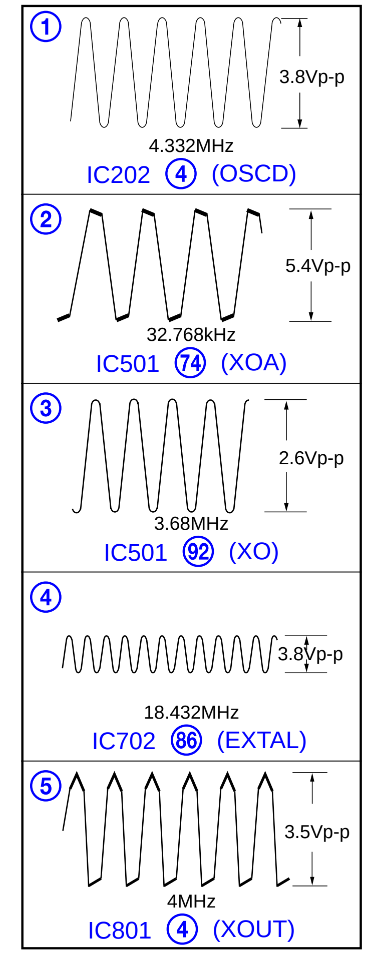
- o—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ○ : Through hole.
- ▬ : Pattern from the side which enables seeing.
  (The other layer's patterns are not indicated.)

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

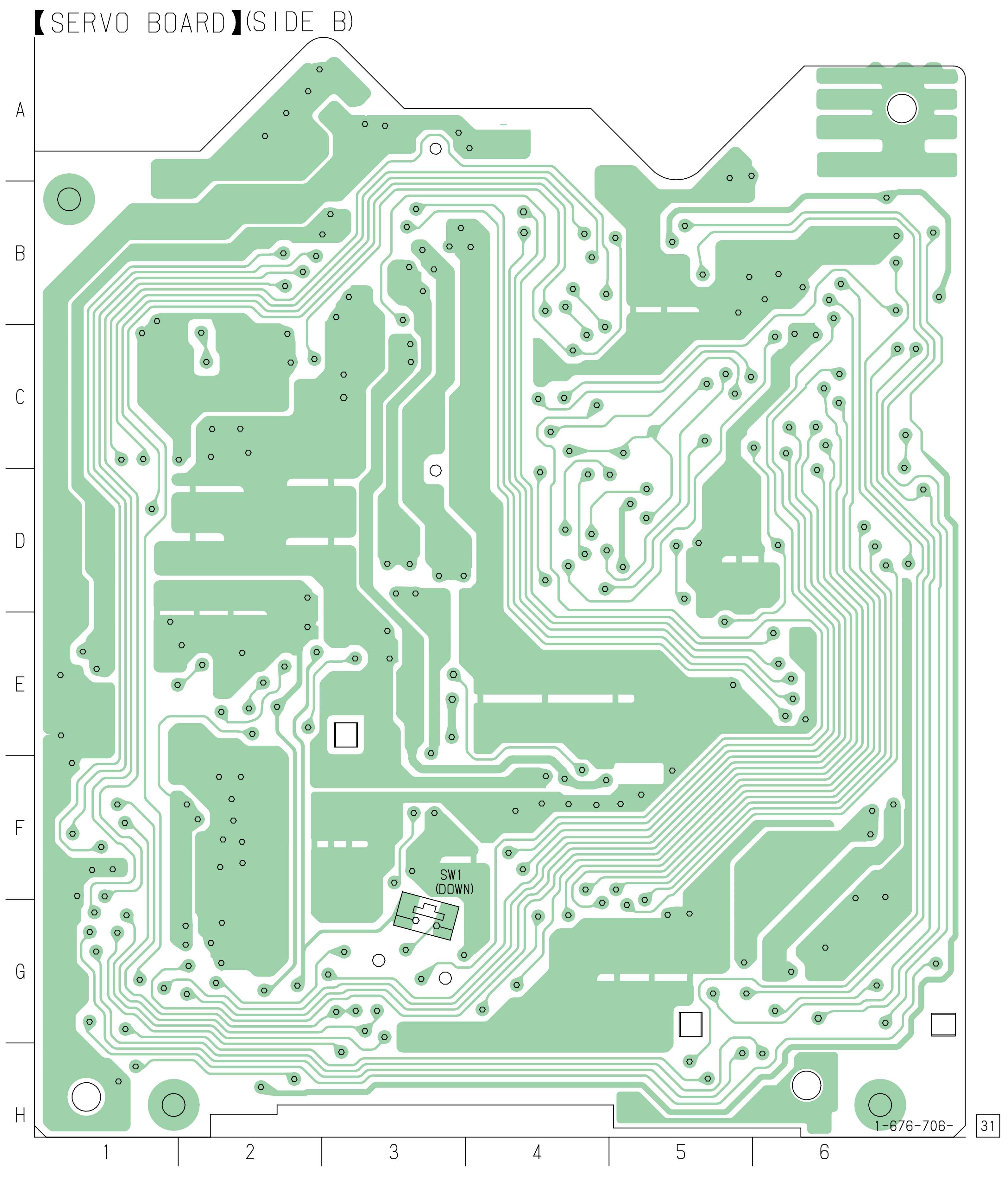
• Waveforms
— Servo Board —
(MODE: CD PLAY)

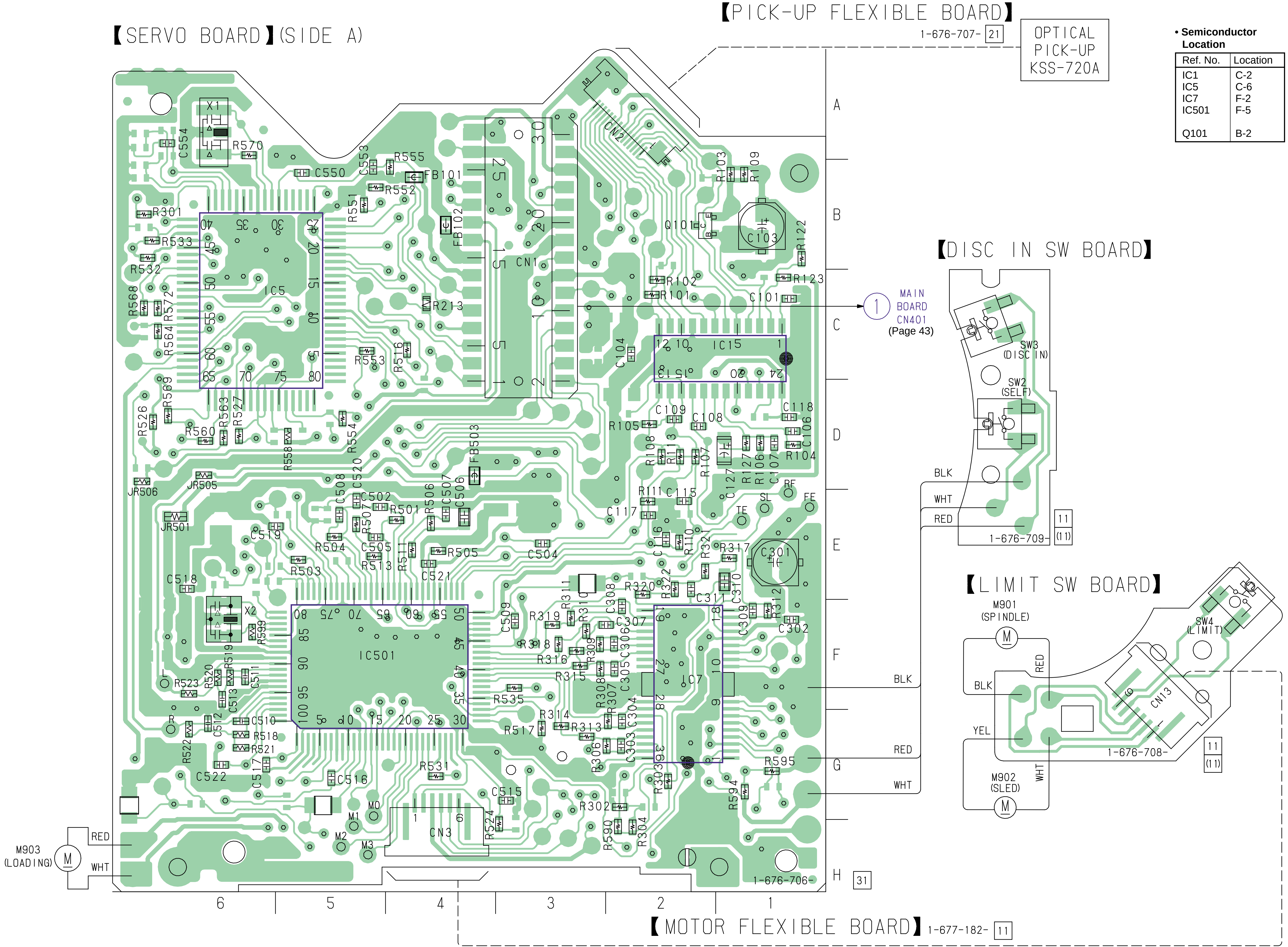


• Waveforms
— Main Board —
(MODE: FM)



4-6. PRINTED WIRING BOARDS — CD MECHANISM SECTION —



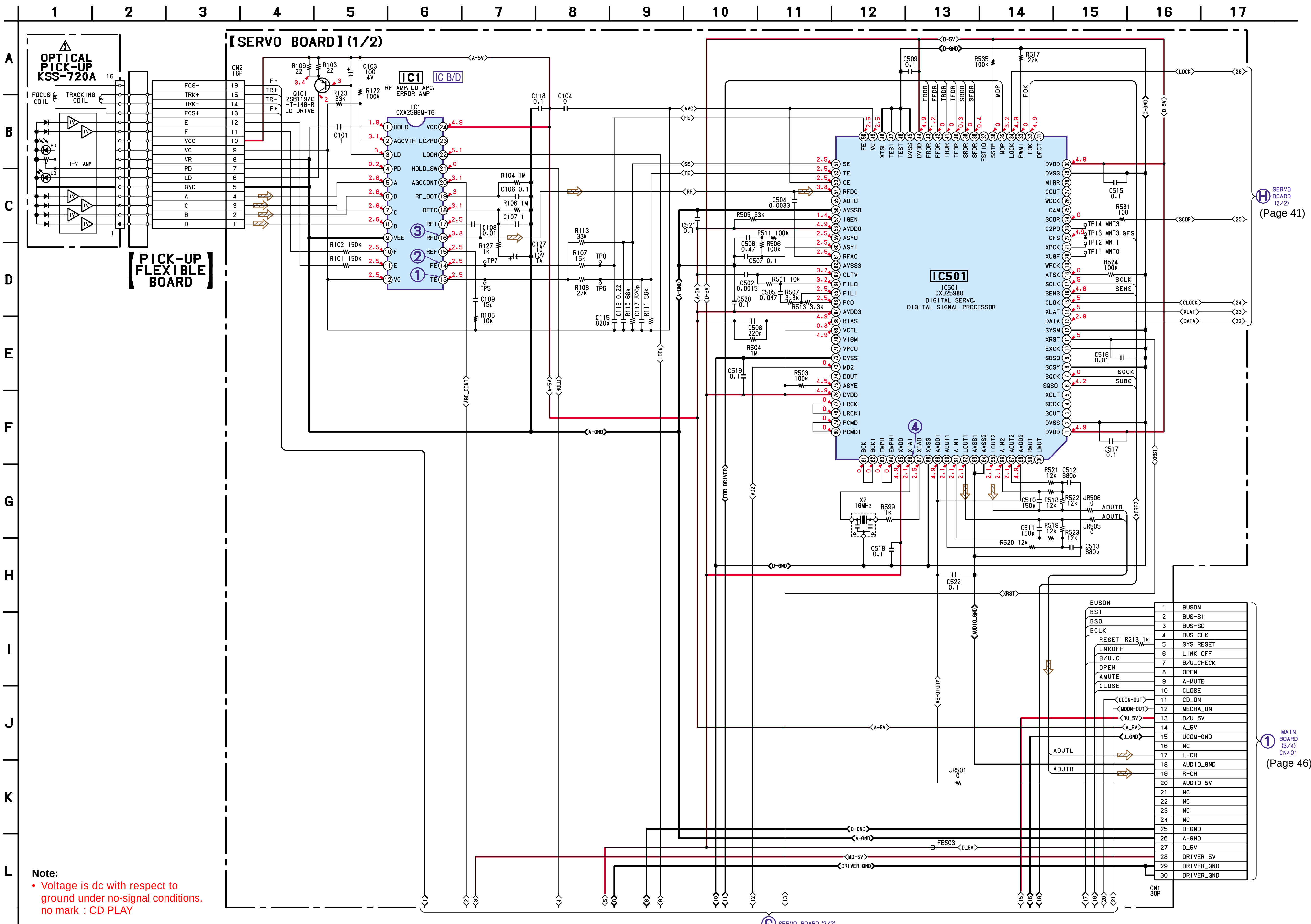


• **Semiconductor Location**

Ref. No.	Location
IC1	C-2
IC5	C-6
IC7	F-2
IC501	F-5
Q101	B-2

• Refer to page 37 for Waveforms.

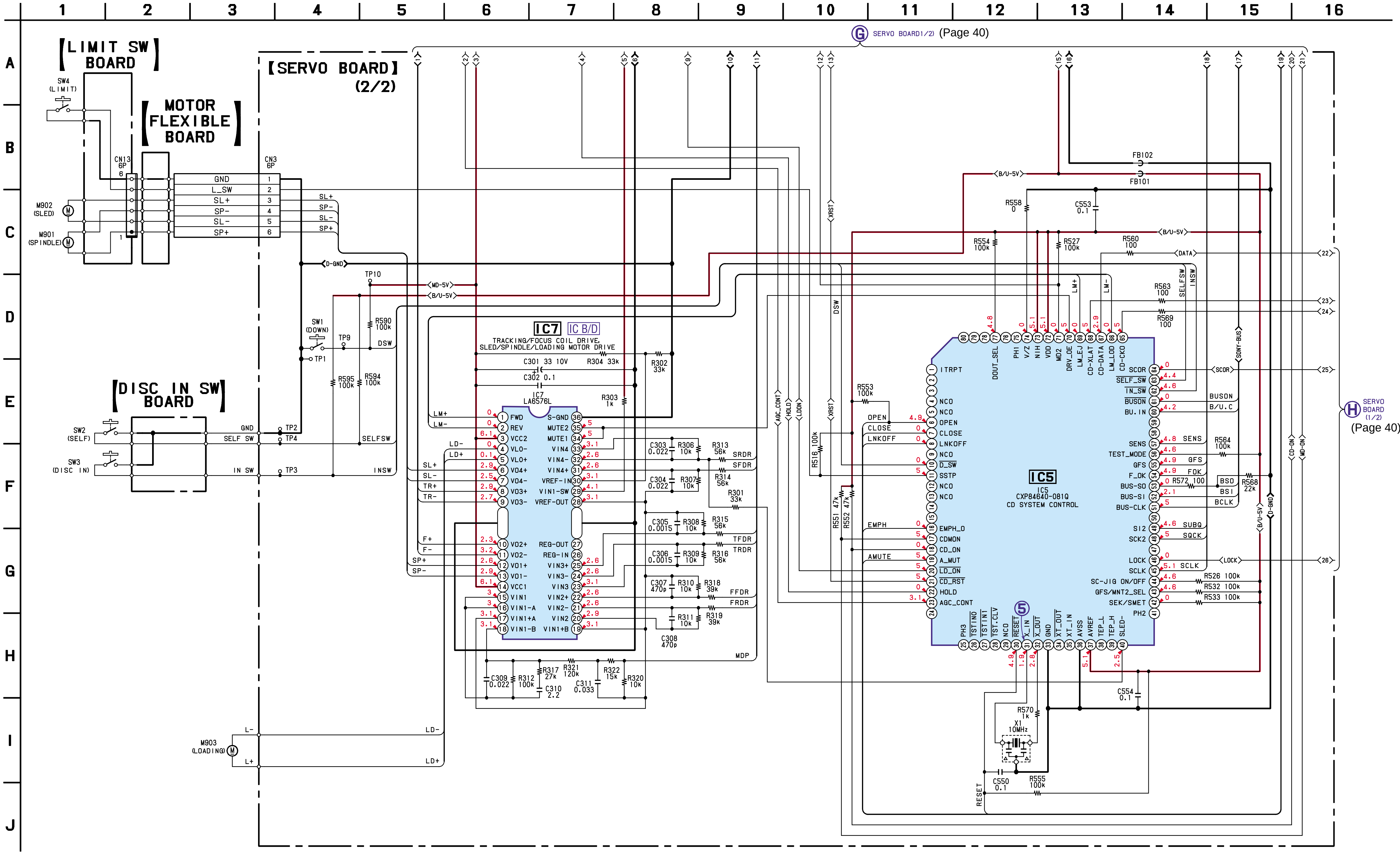
4-7. SCHEMATIC DIAGRAM — CD MECHANISM SECTION (1/2) — • Refer to page 54 for IC Block Diagrams.



Note:
• Voltage is dc with respect to ground under no-signal conditions.
no mark : CD PLAY

4-8. SCHEMATIC DIAGRAM — CD MECHANISM SECTION (2/2) —

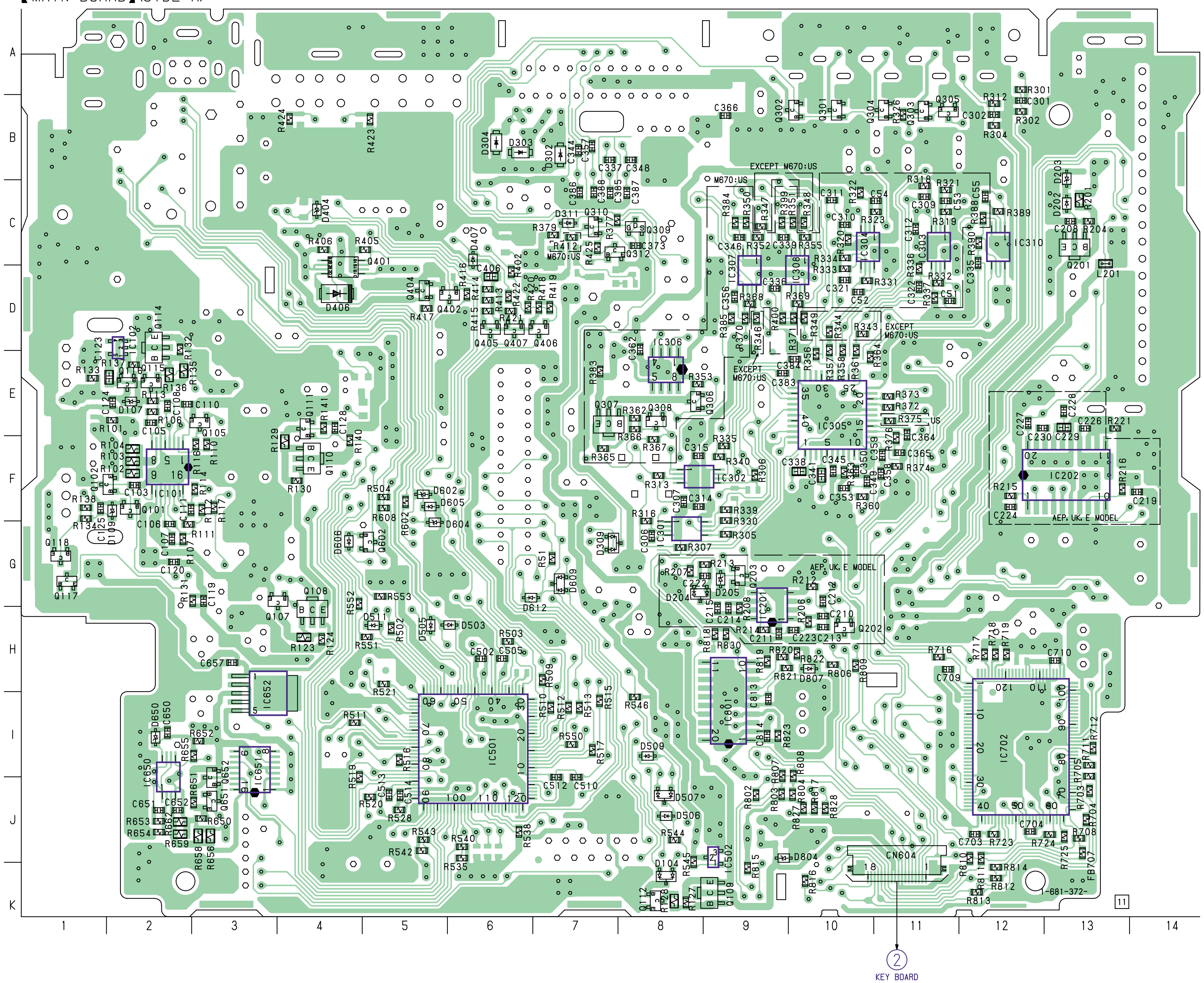
• Refer to page 37 for Waveforms.
• Refer to page 54 for IC Block Diagrams.



Note:
- Voltage is dc with respect to ground under no-signal conditions.
  no mark : CD PLAY

4-9. PRINTED WIRING BOARDS — MAIN SECTION —

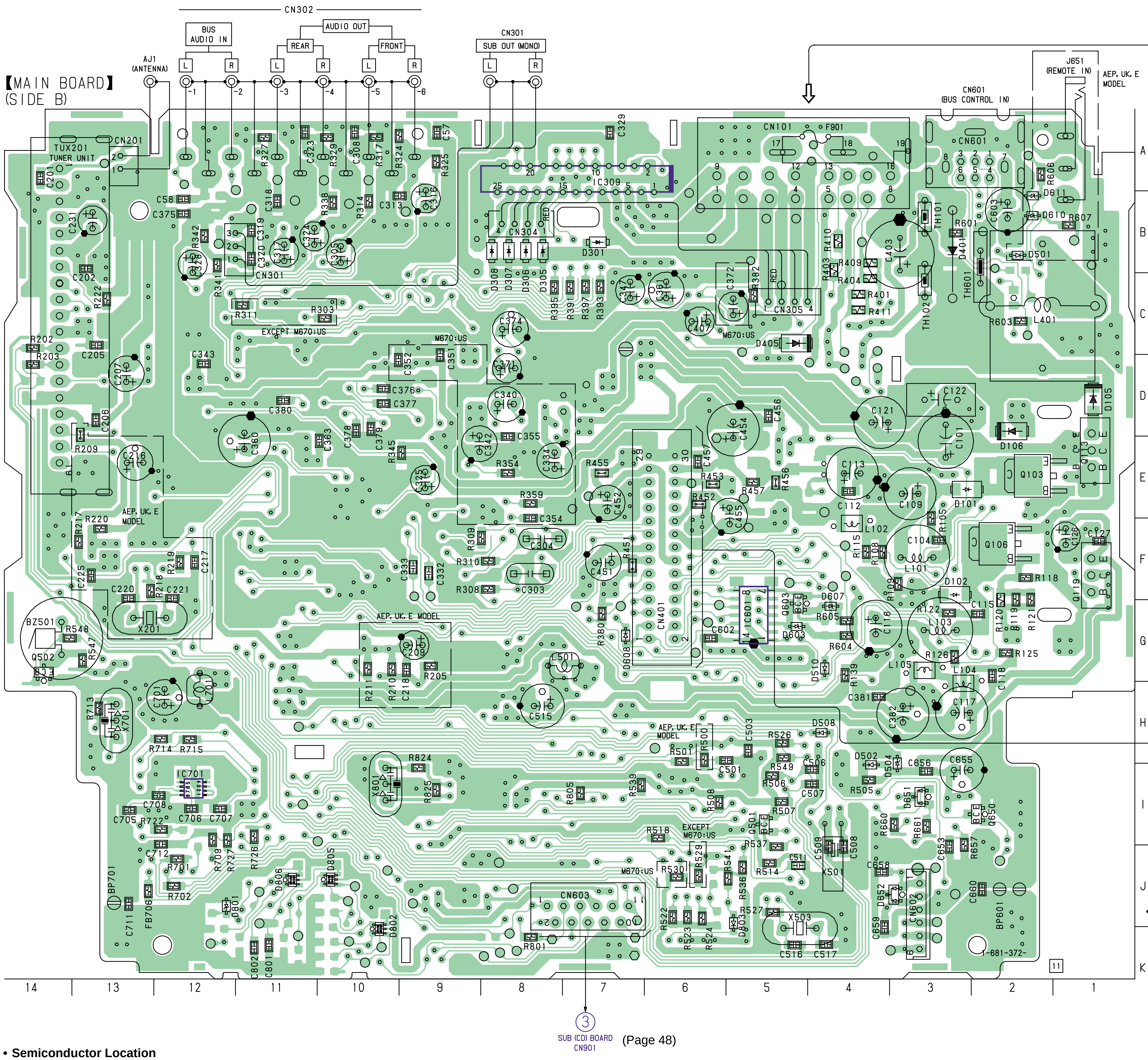
【MAIN BOARD】(SIDE A)



(Page 50)

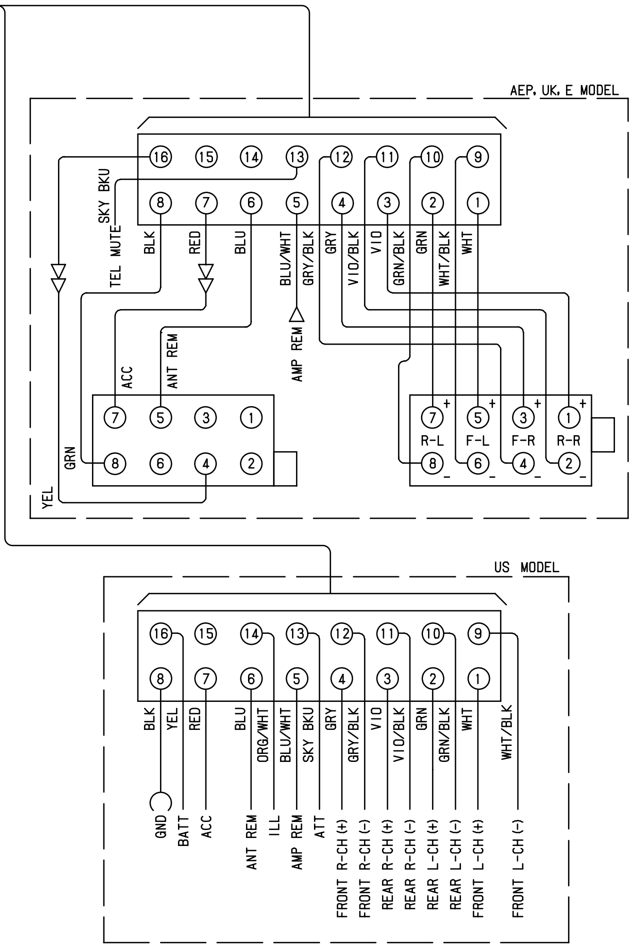
• **Semiconductor Location**

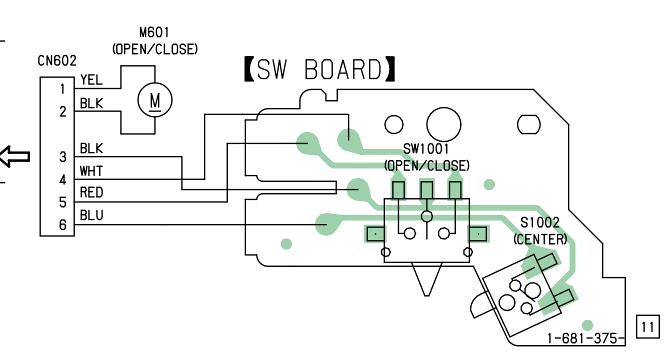
Ref. No.	Location	Ref. No.	Location
D104	K-8	IC502	J-9
D107	E-2	IC650	J-2
D109	G-2	IC651	I-3
D202	C-13	IC652	I-3
D203	B-13	IC702	I-12
D204	G-8	IC801	I-9
D205	G-9		
D302	B-7	Q101	F-2
D303	B-6	Q102	F-1
D304	B-6	Q105	E-3
D309	G-7	Q107	H-4
D311	C-7	Q108	G-4
D404	C-4	Q109	K-9
D406	D-4	Q110	F-4
D407	C-6	Q111	E-4
D503	H-6	Q112	K-8
D505	H-5	Q114	D-2
D506	J-8	Q115	E-2
D507	J-8	Q116	E-2
D509	I-8	Q117	G-1
D511	H-5	Q118	G-1
D602	F-5	Q201	C-13
D604	G-4	Q202	H-10
D605	F-5	Q203	G-9
D606	G-4	Q301	B-10
D609	G-7	Q302	B-9
D612	G-6	Q303	B-11
D650	I-2	Q304	B-10
D804	J-10	Q305	B-11
D807	H-10	Q306	E-8
		Q307	E-7
IC101	F-2	Q308	E-8
IC102	D-2	Q309	C-8
IC201	G-9	Q310	C-7
IC202	F-13	Q312	C-8
IC301	G-8	Q401	C-4
IC302	F-9	Q402	D-5
IC303	C-11	Q404	D-5
IC304	C-11	Q405	D-6
IC305	E-10	Q406	D-7
IC306	E-8	Q407	D-6
IC307	D-9	Q602	G-5
IC308	D-9	Q651	J-3
IC310	C-12	Q652	I-3
IC501	I-6		



(Page 39)

(Page 48)



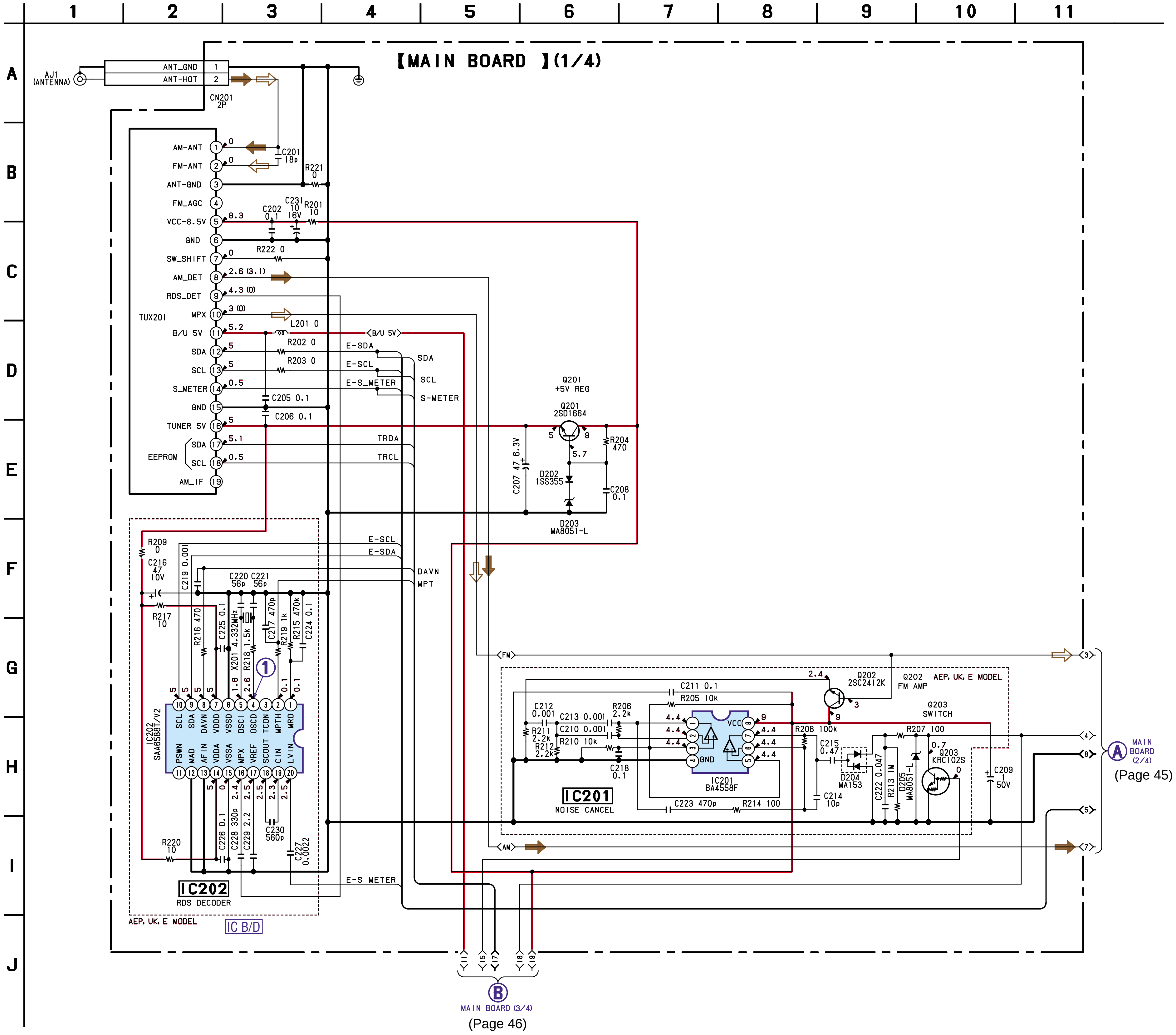


• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D101	E-3	D306	B-8	D502	H-4	D608	G-7	D802	J-10	IC601	G-5	Q119	F-1
D102	F-3	D307	B-8	D504	I-4	D610	B-2	D803	J-5	IC701	I-12	Q501	I-5
D105	D-1	D308	B-8	D508	H-4	D611	B-2	D805	J-10			Q502	G-14
D106	E-2	D401	B-3	D510	G-4	D651	I-3	D806	J-11	Q103	E-2	Q603	G-5
D301	B-7	D405	C-5	D603	G-5	D652	J-4			Q106	F-2	Q650	I-2
D305	B-8	D501	B-2	D607	G-4	D801	J-12	IC309	A-7	Q113	E-1		

• Refer to page 37 for Waveforms.

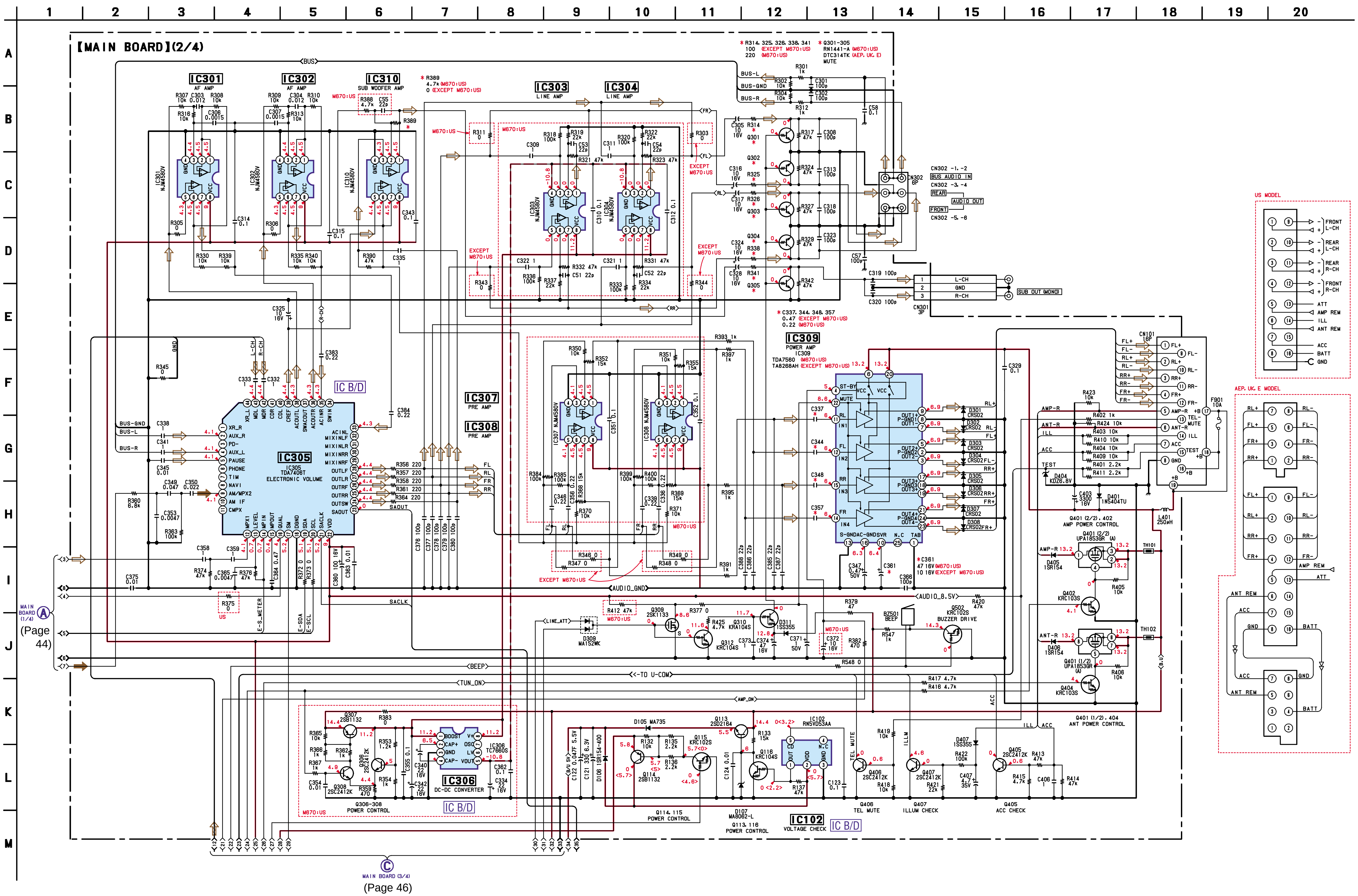
4-10. SCHEMATIC DIAGRAM — MAIN SECTION (1/4) — • Refer to page 54 for IC Block Diagrams.



Note:

- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM

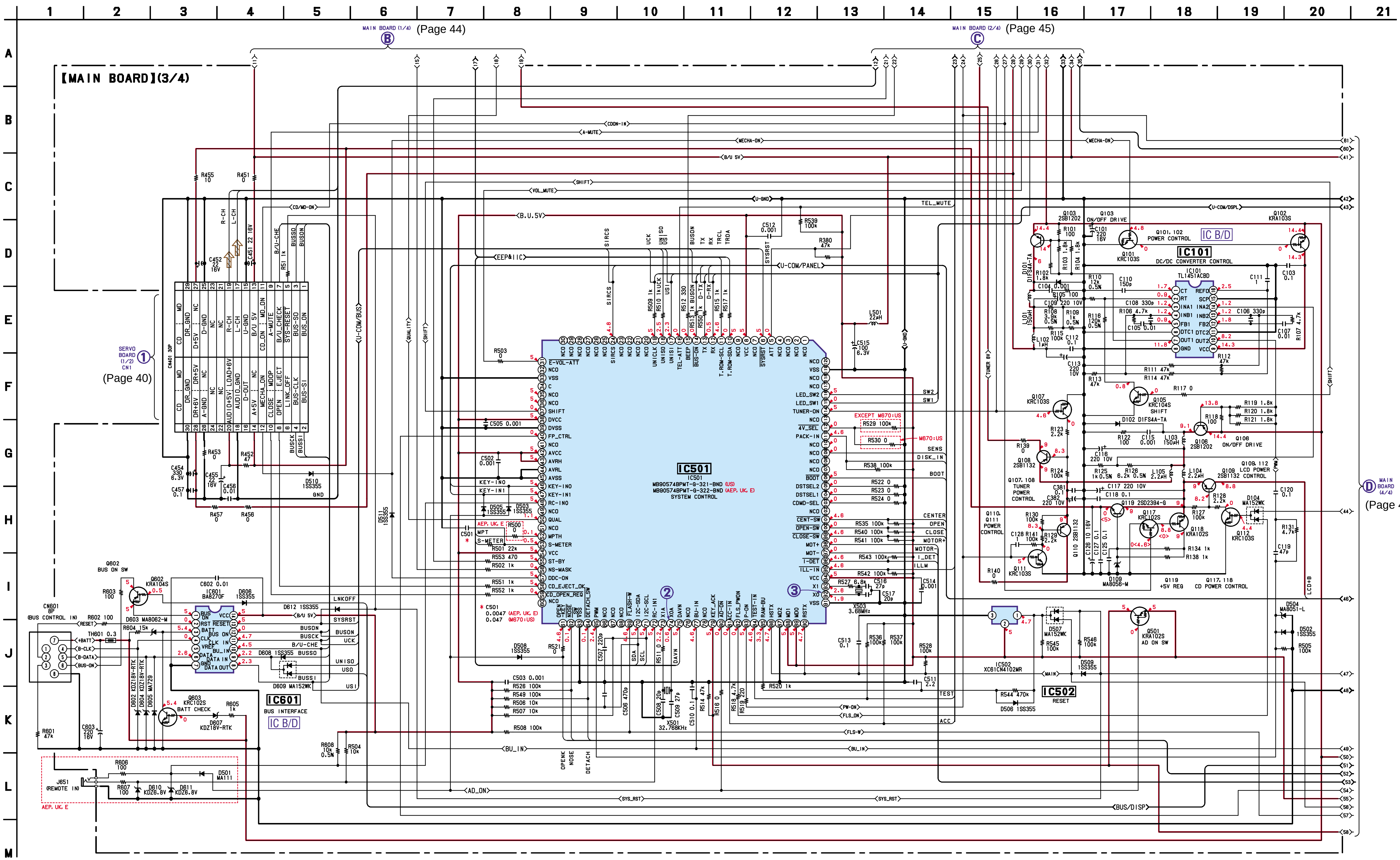
4-11. SCHEMATIC DIAGRAM — MAIN SECTION (2/4) — • Refer to page 54 for IC Block Diagrams.



Note:
• Voltage is dc with respect to ground under no-signal (detuned) condition.
no mark : FM

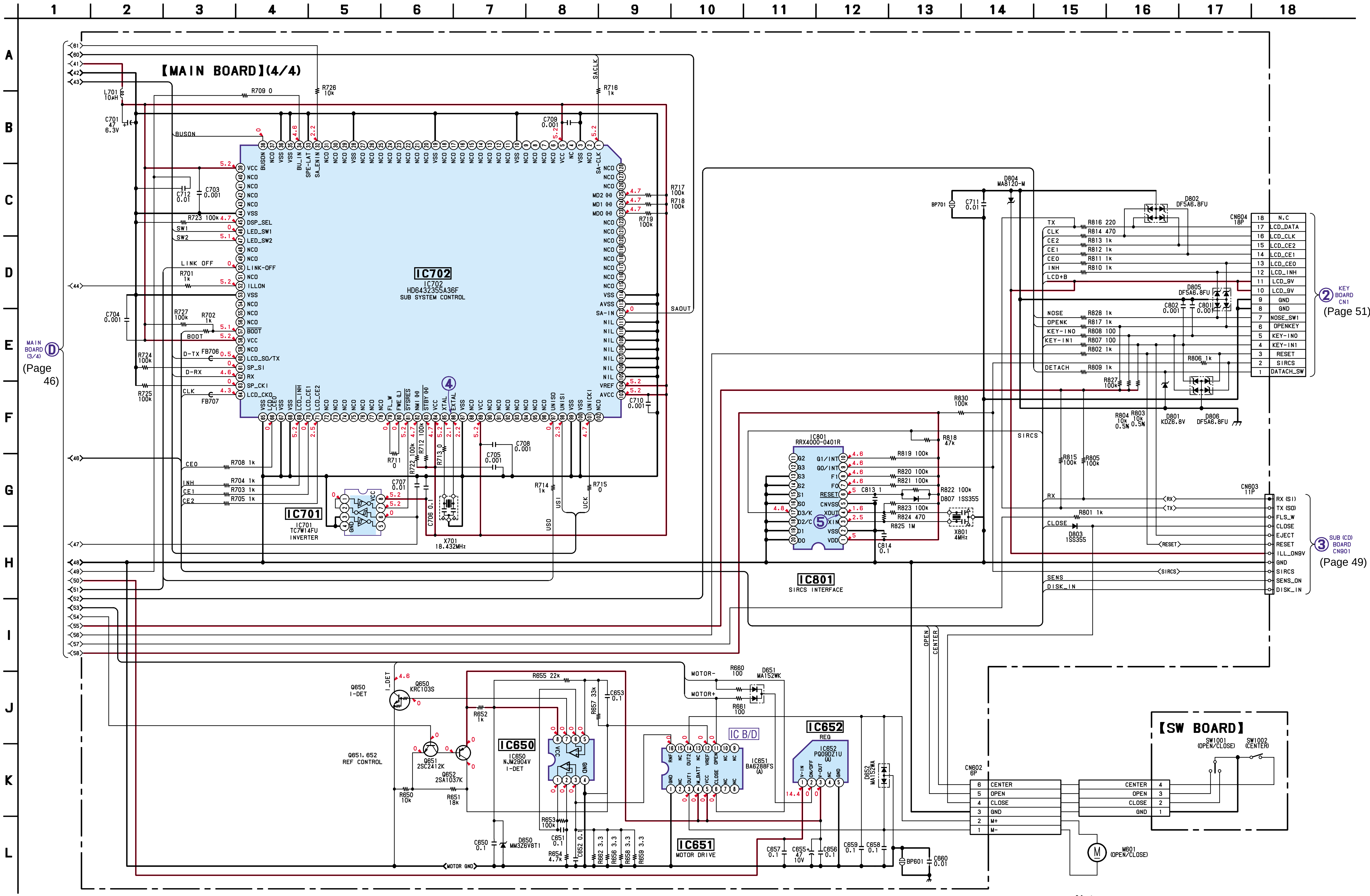
• Refer to page 37 for Waveforms.

4-12. SCHEMATIC DIAGRAM — MAIN SECTION (3/4) — • Refer to page 54 for IC Block Diagrams.



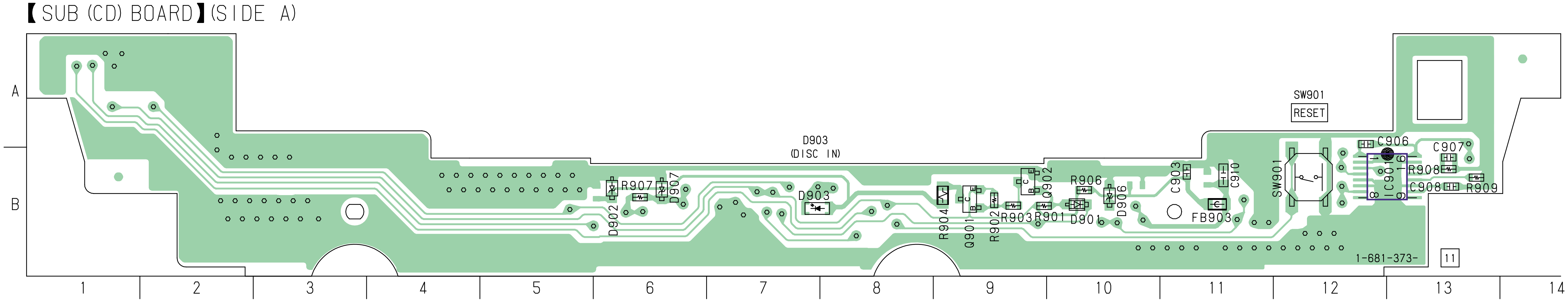
Note:
• Voltage is dc with respect to ground under no-signal (detuned) condition.
no mark : FM
( ) : AM/MW/LW
< > : CD PLAY

4-13. SCHEMATIC DIAGRAM — MAIN SECTION (4/4) —
• Refer to page 37 for Waveforms.
• Refer to page 54 for IC Block Diagrams.

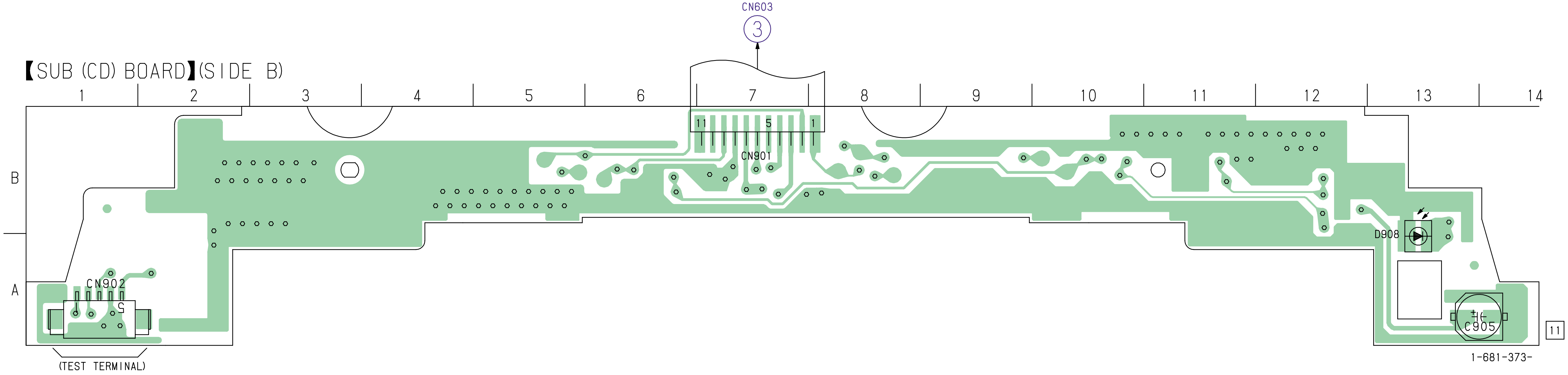


Note:
• Voltage is dc with respect to ground under no-signal (detuned) condition.
no mark : FM

4-14. PRINTED WIRING BOARD — SUB (CD) SECTION —



(Page 43)

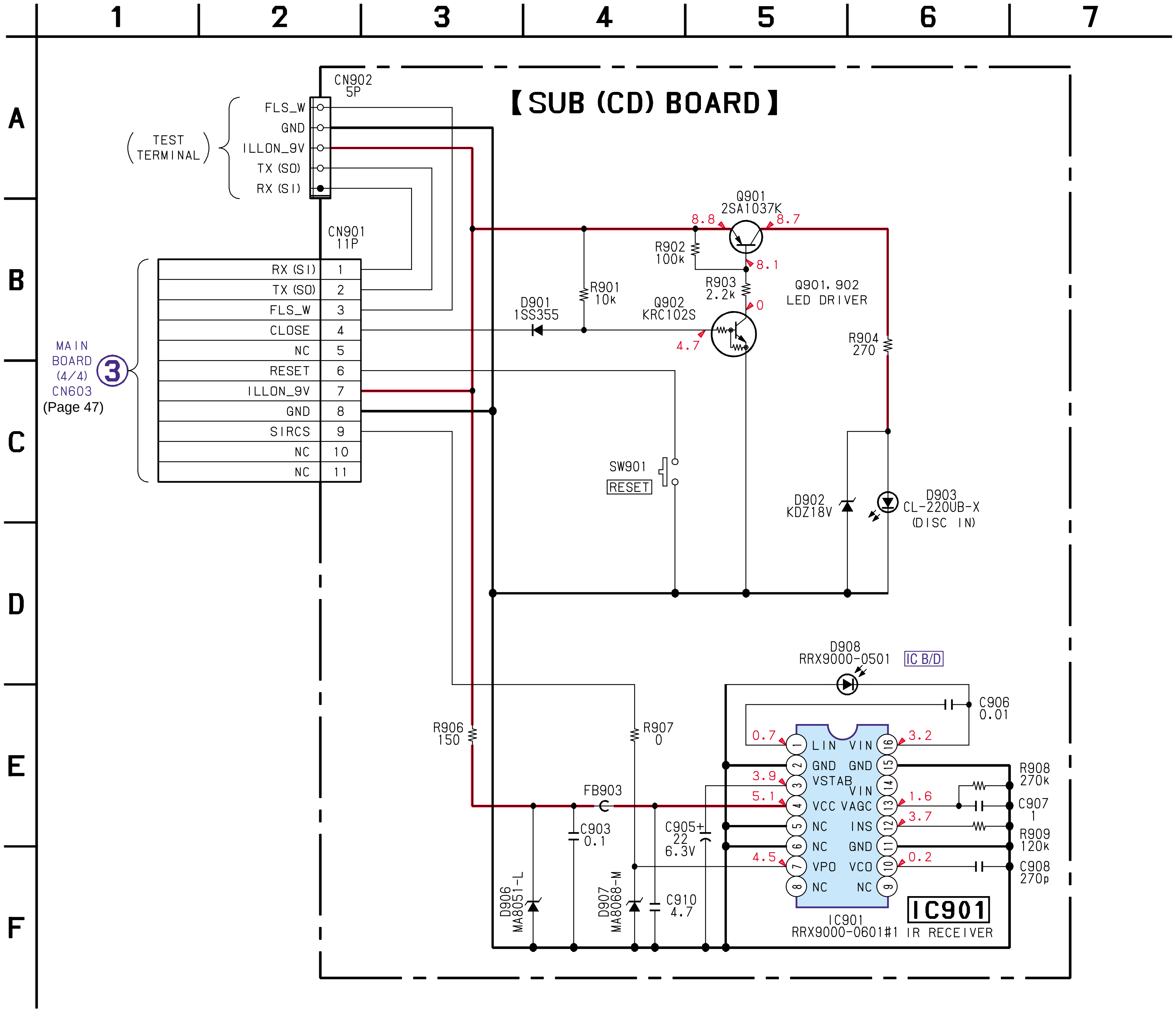


• **Semiconductor Location**

Ref. No.	Location
D901	B-10
D902	B-6
D903	B-7
D906	B-10
D907	B-6
(D908)	B-13
IC901	B-13
Q901	B-9
Q902	B-9

( ) : SIDE B

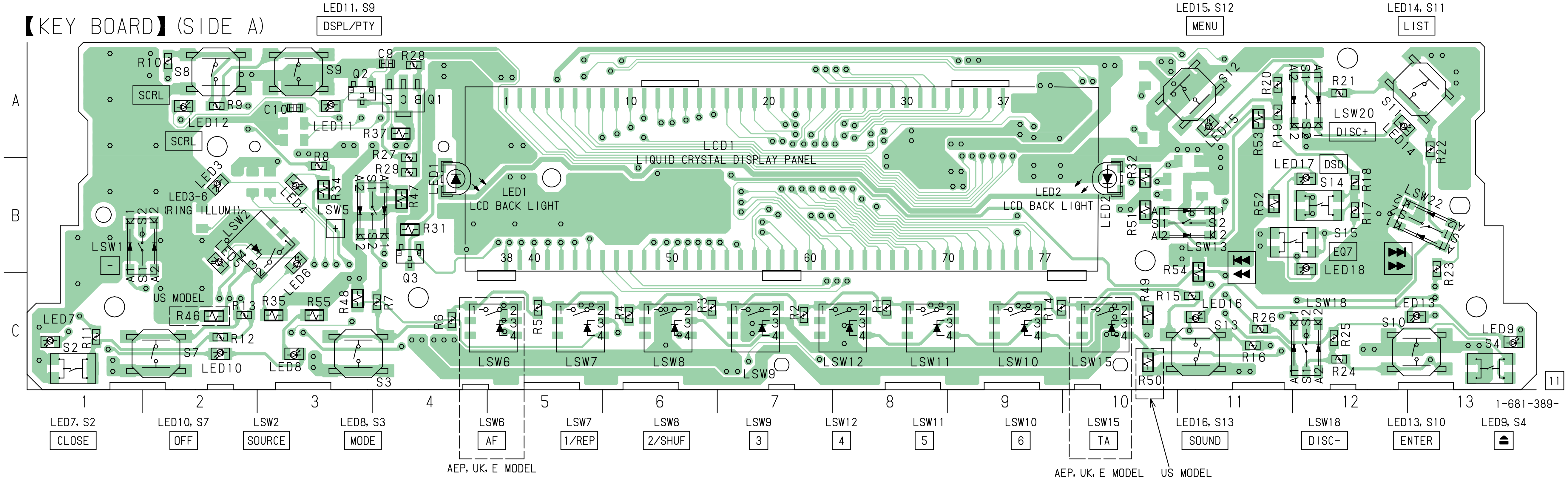
4-15. SCHEMATIC DIAGRAM — SUB (CD) SECTION — • Refer to page 55 for IC Block Diagram.



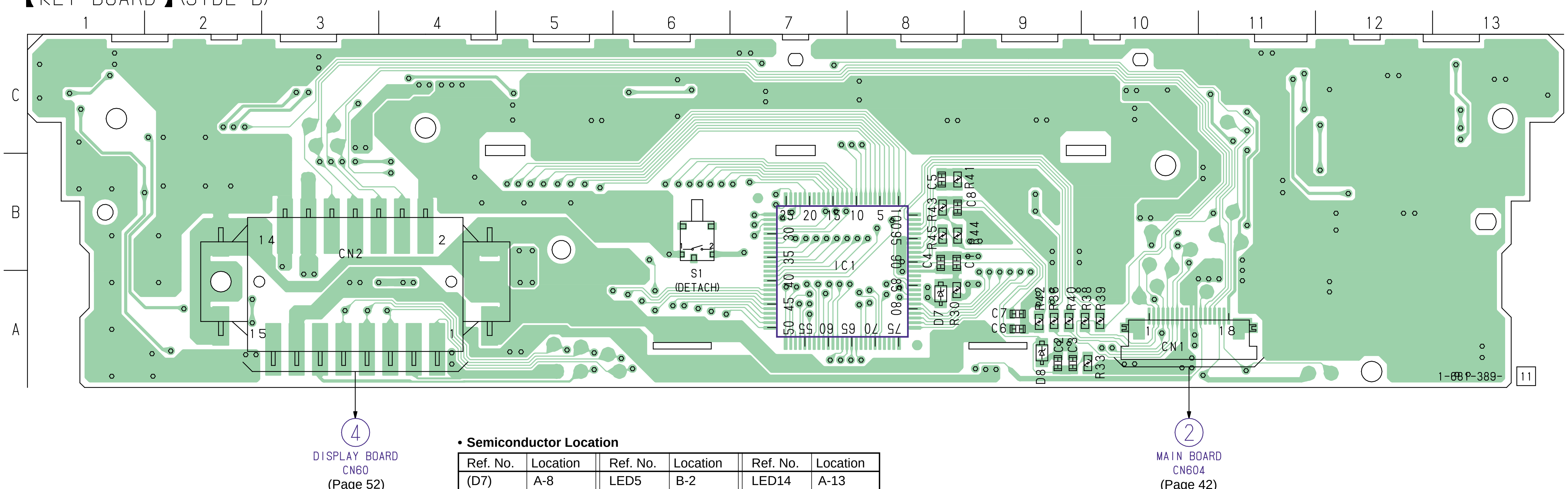
Note:
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM

4-16. PRINTED WIRING BOARD — KEY SECTION —

【KEY BOARD】(SIDE A)



【KEY BOARD】(SIDE B)

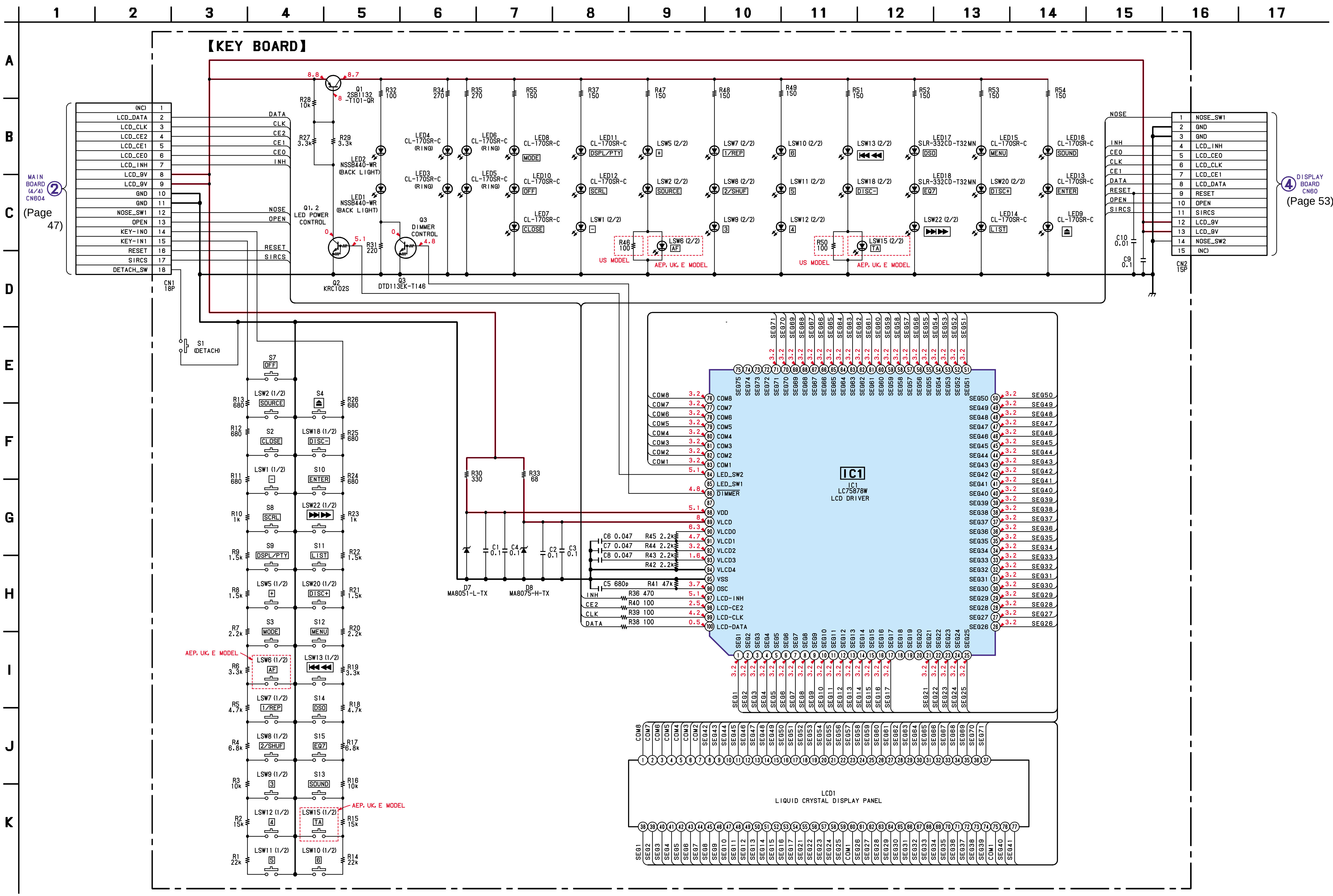


• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
(D7)	A-8	LED5	B-2	LED14	A-13
(D8)	A-9	LED6	B-3	LED15	A-11
		LED7	C-1	LED16	C-11
(IC1)	B-7	LED8	C-3	LED17	B-12
		LED9	C-13	LED18	C-12
LED1	B-4	LED10	C-2		
LED2	B-10	LED11	A-3	Q1	A-4
LED3	B-2	LED12	A-2	Q2	A-3
LED4	B-3	LED13	C-13	Q3	B-4

( ) : SIDE B

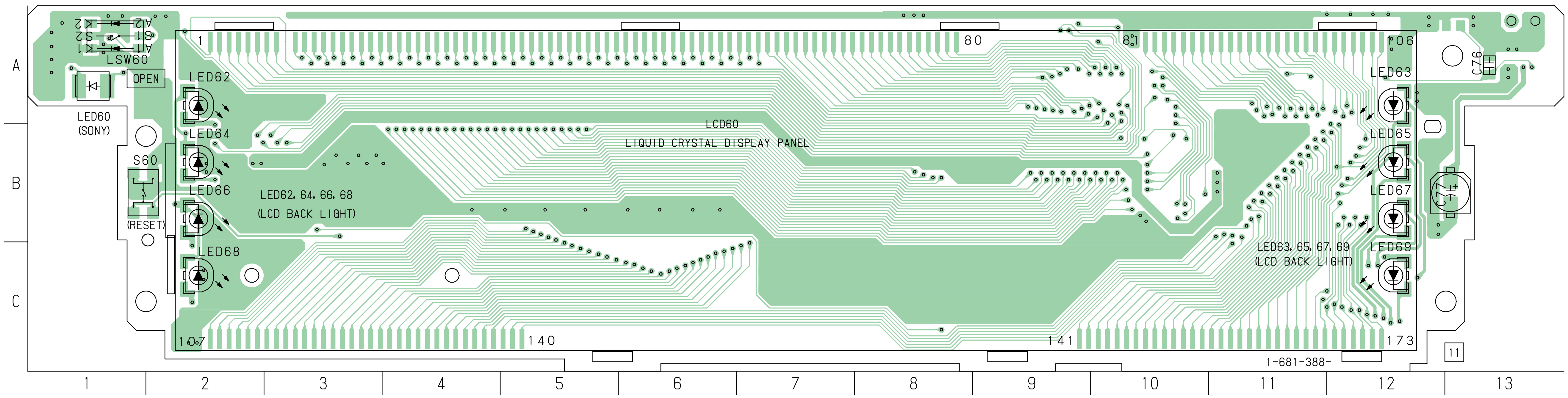
4-17. SCHEMATIC DIAGRAM — KEY SECTION —



Note:
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM

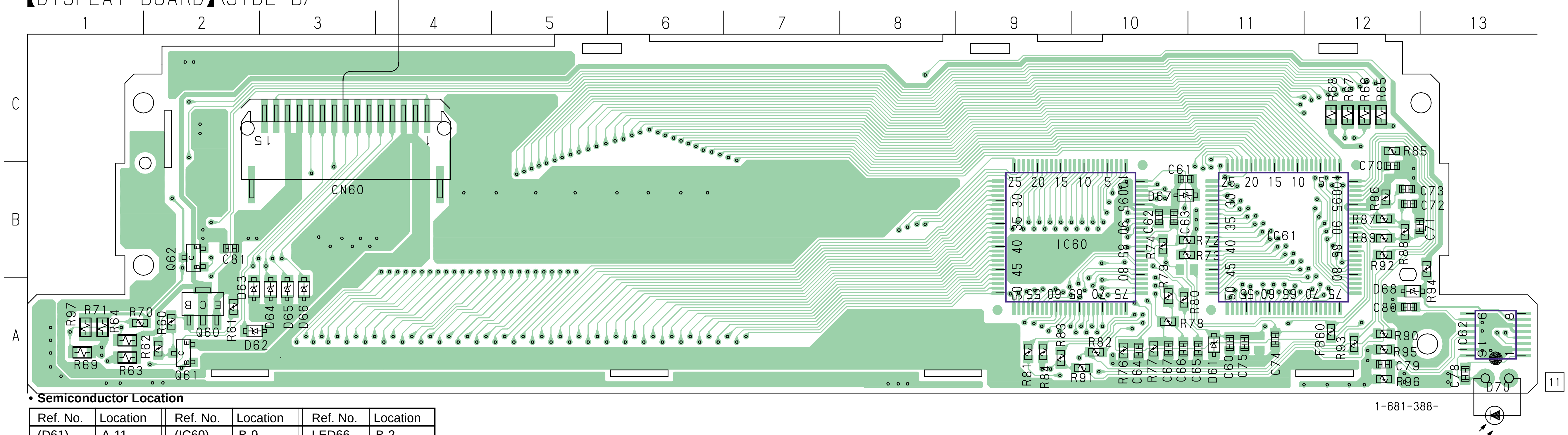
4-18. PRINTED WIRING BOARD — DISPLAY SECTION —

【DISPLAY BOARD】(SIDE A)



(Page 50)
KEY BOARD
CN2
4

【DISPLAY BOARD】(SIDE B)

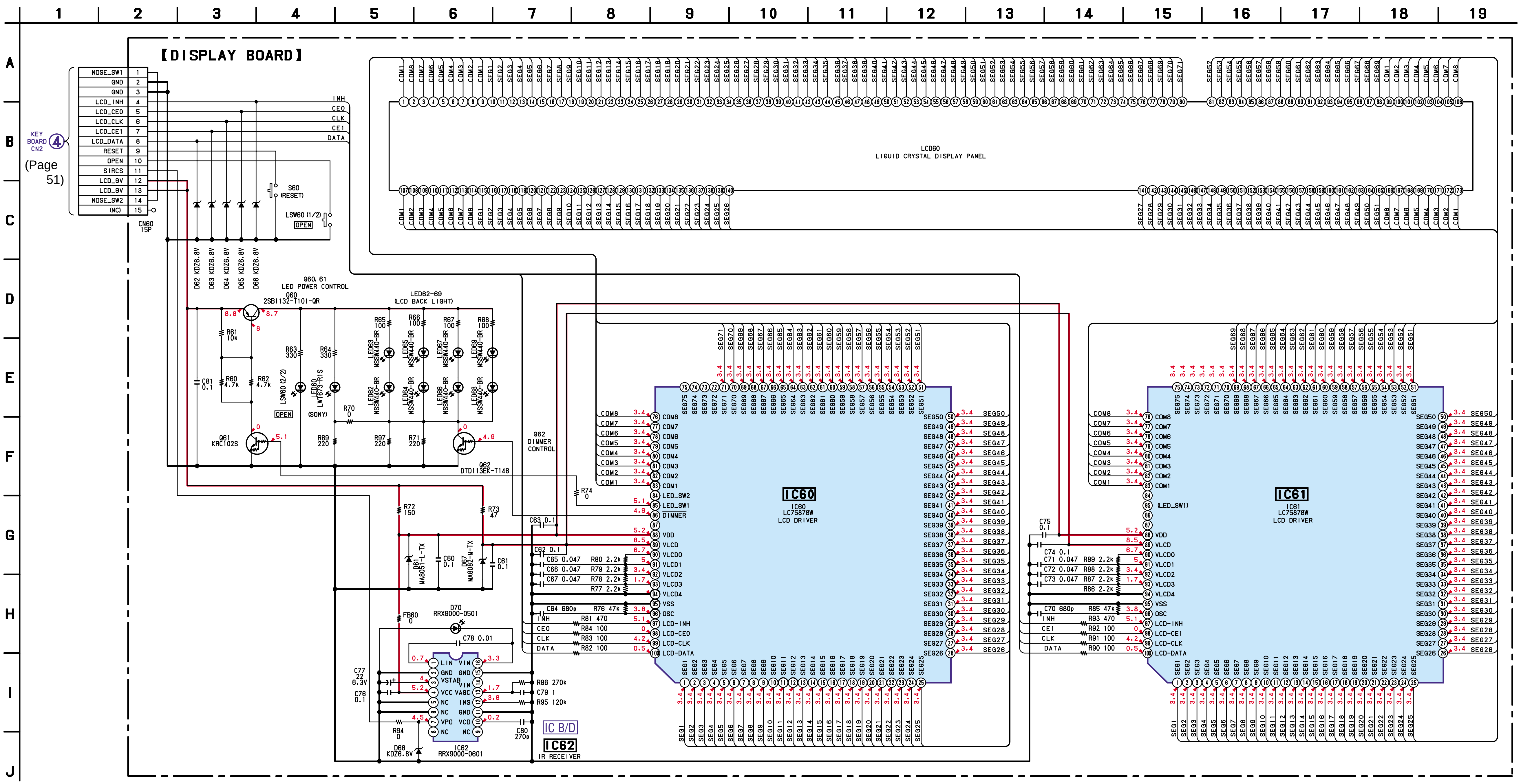


• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
(D61)	A-11	(IC60)	B-9	LED66	B-2
(D62)	A-2	(IC61)	B-11	LED67	B-12
(D63)	A-2	(IC62)	A-13	LED68	C-2
(D64)	A-3			LED69	C-12
(D65)	A-3	LED60	A-1		
(D66)	A-3	LED62	A-2	(Q60)	A-2
(D67)	B-10	LED63	A-12	(Q61)	A-2
(D68)	A-12	LED64	B-2	(Q62)	B-2
(D70)	A-13	LED65	B-12		

( ) : SIDE B

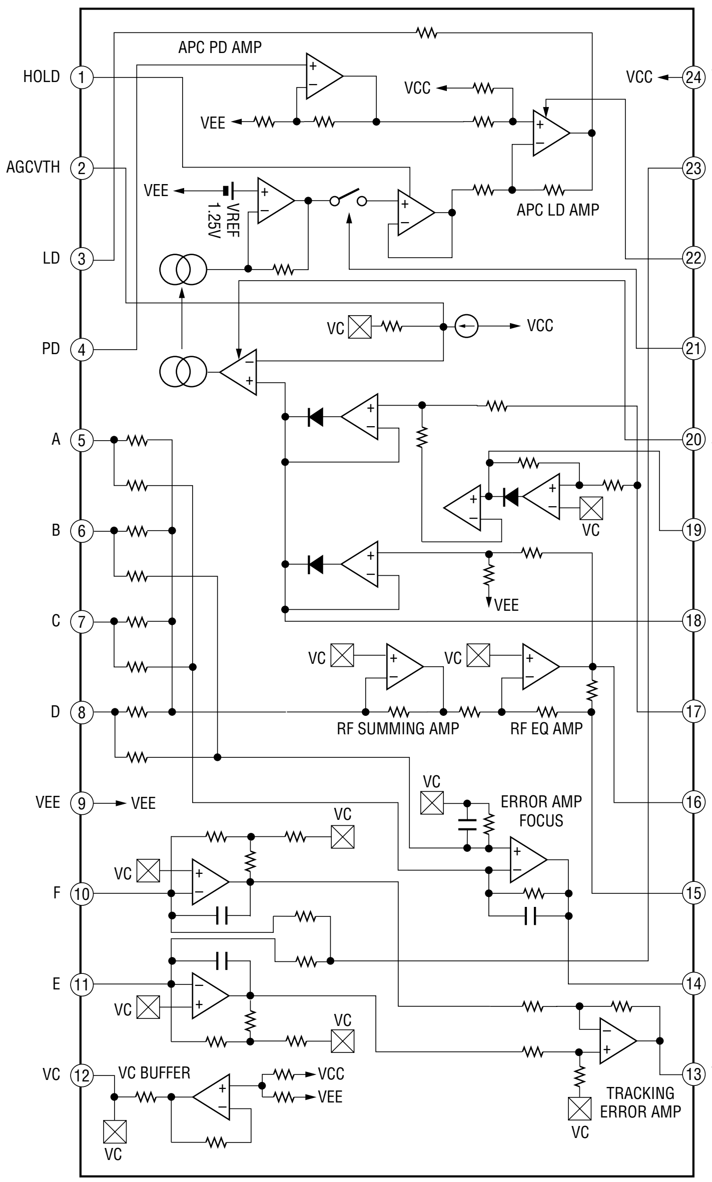
4-19. SCHEMATIC DIAGRAM — DISPLAY SECTION — • Refer to page 55 for IC Block Diagrams.



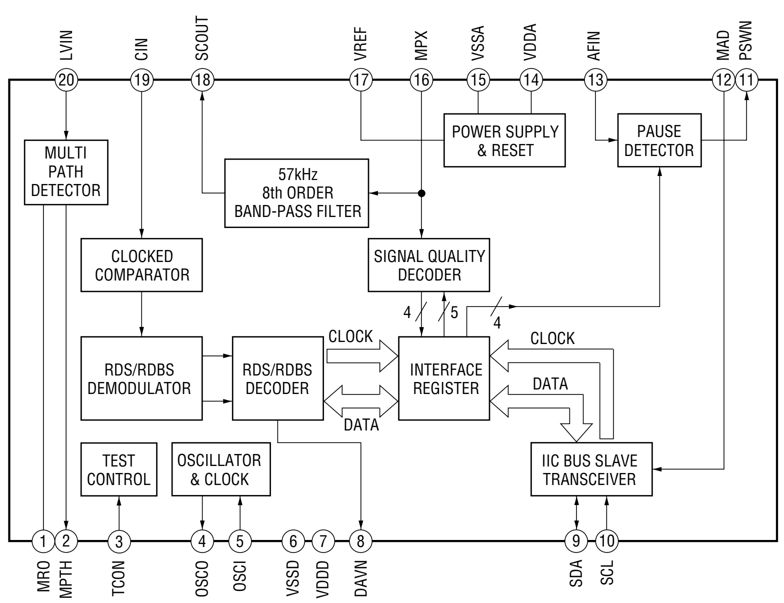
Note:
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM

• IC BLOCK DIAGRAMS

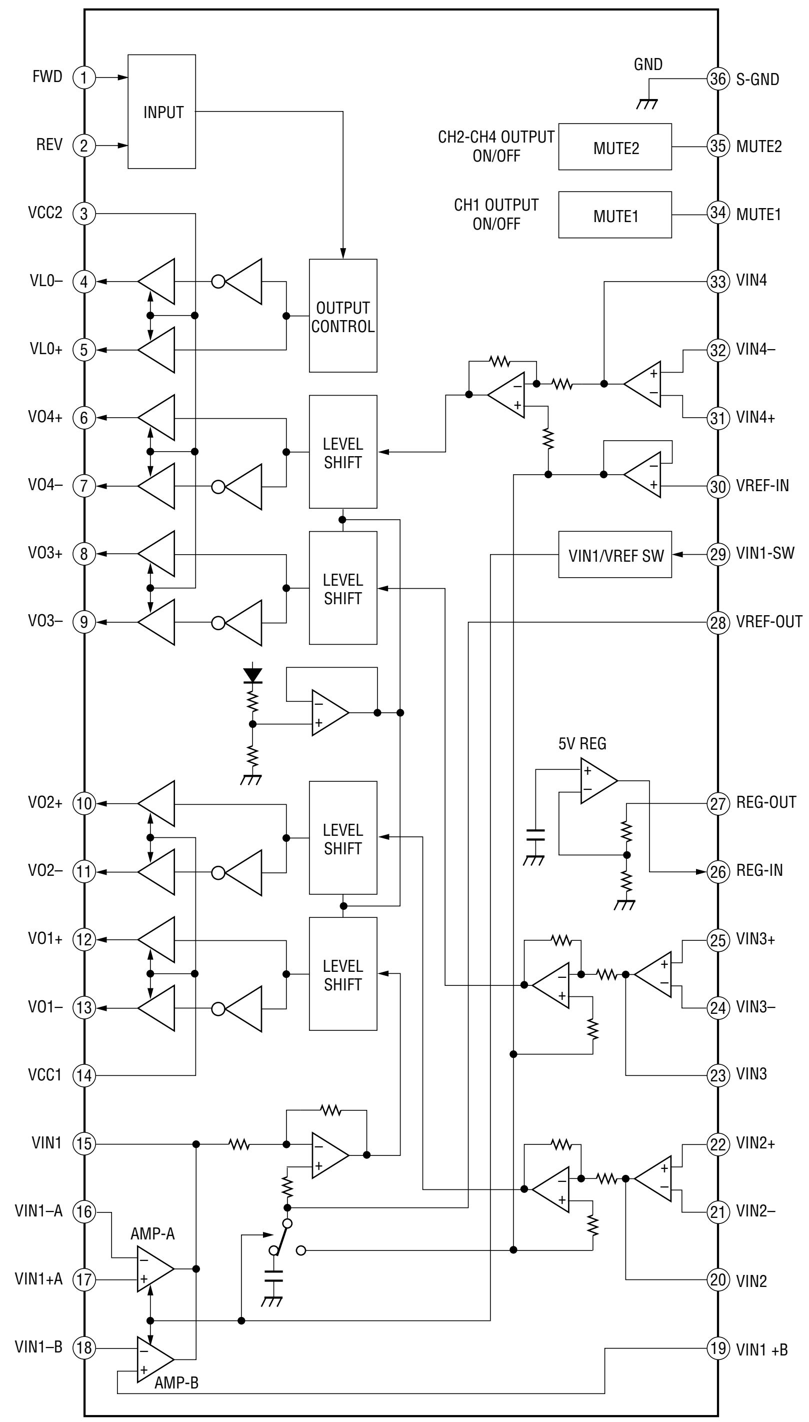
IC1 CXA2596M



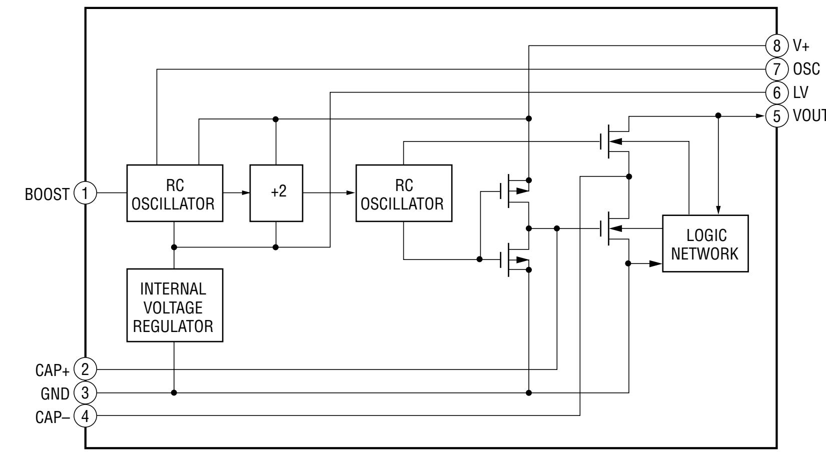
IC202 SAA6588T-V2-118



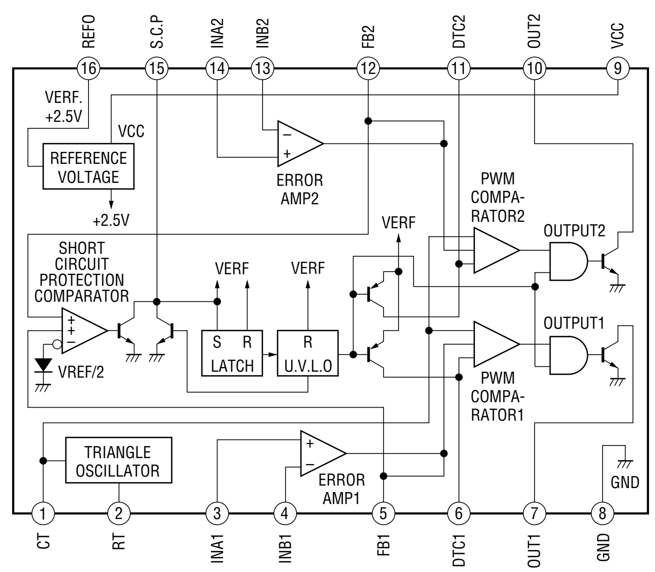
IC7 LA6576L-TE-L



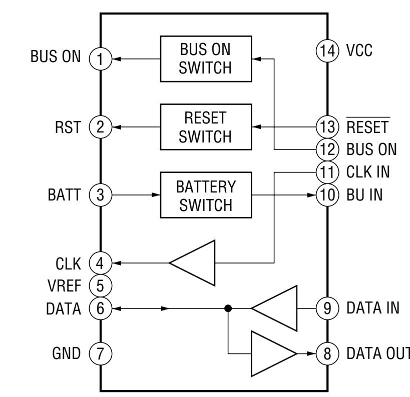
IC306 TC7660SE0A713



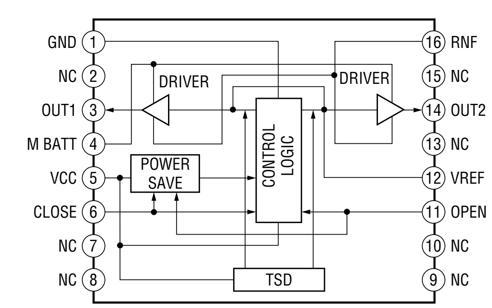
IC101 TL1451ACDB-E20



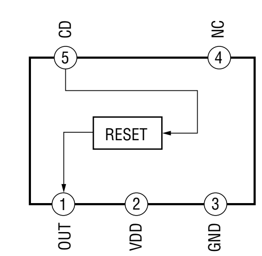
IC601 BA8270F-E2



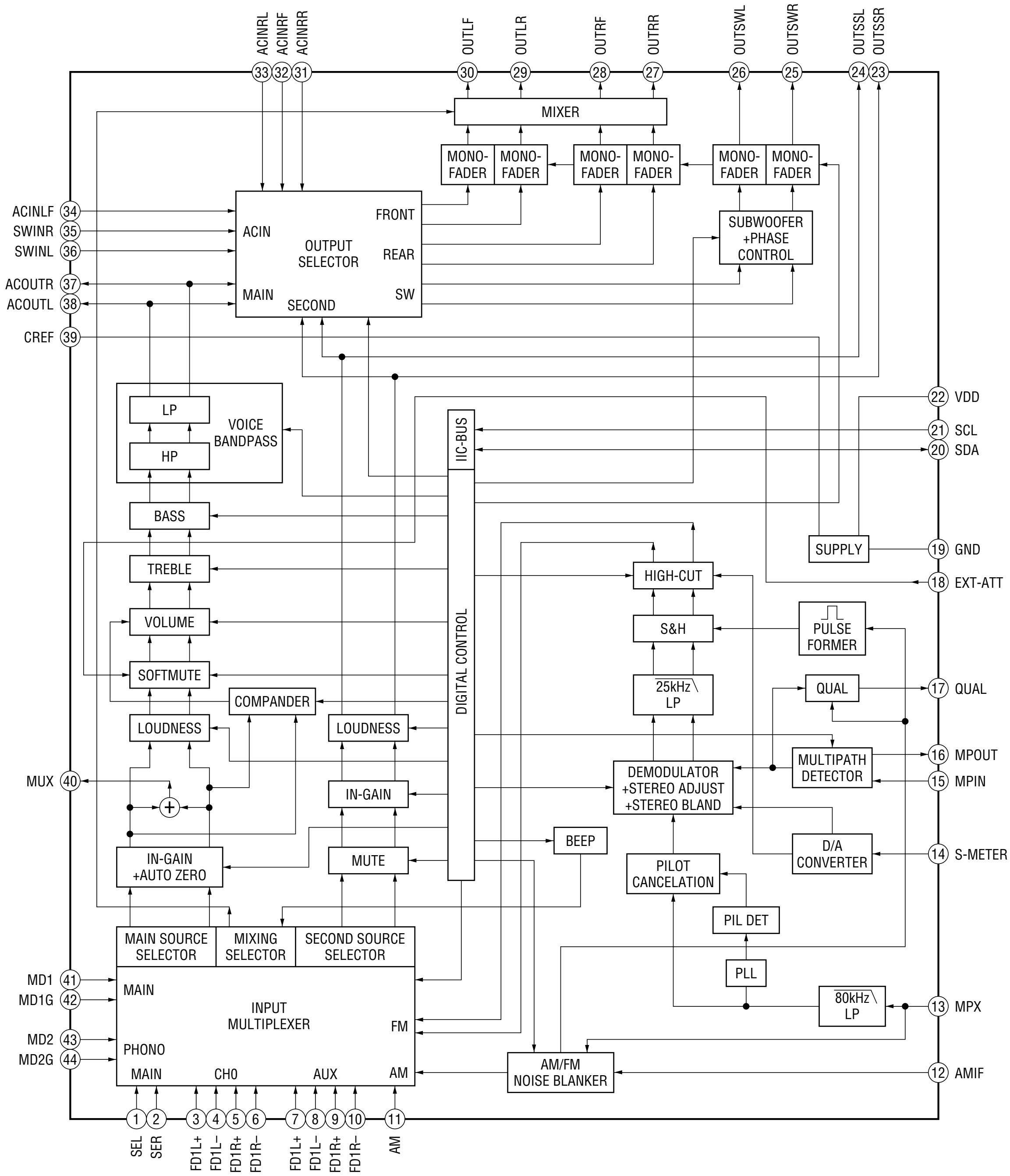
IC651 BA6288FS-E2



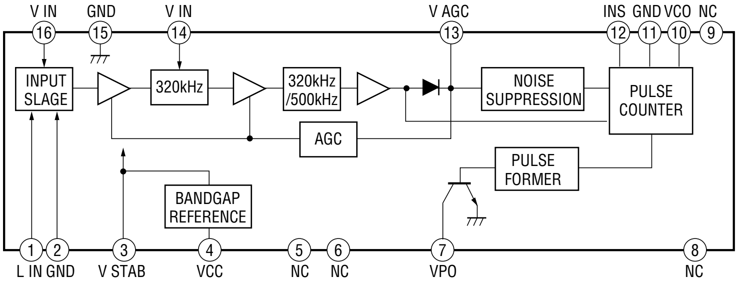
IC102 RN5VD53AA-TL



IC305 TDA7406TR



IC62, 901 RRX9000-0601

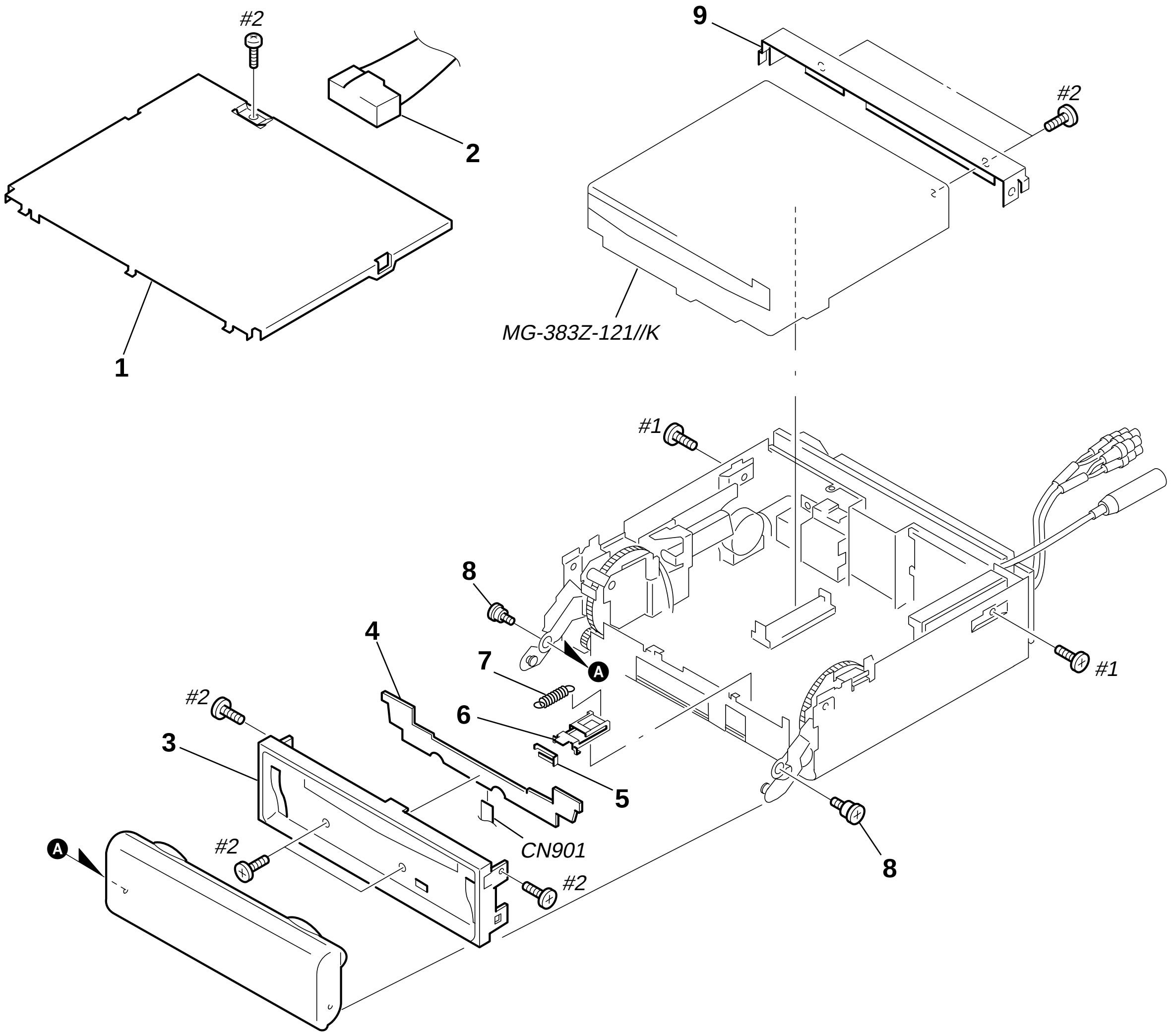


SECTION 5
EXPLODED VIEWS

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Accessories and packing materials and hardware (# mark) list are given in the last of this parts list.

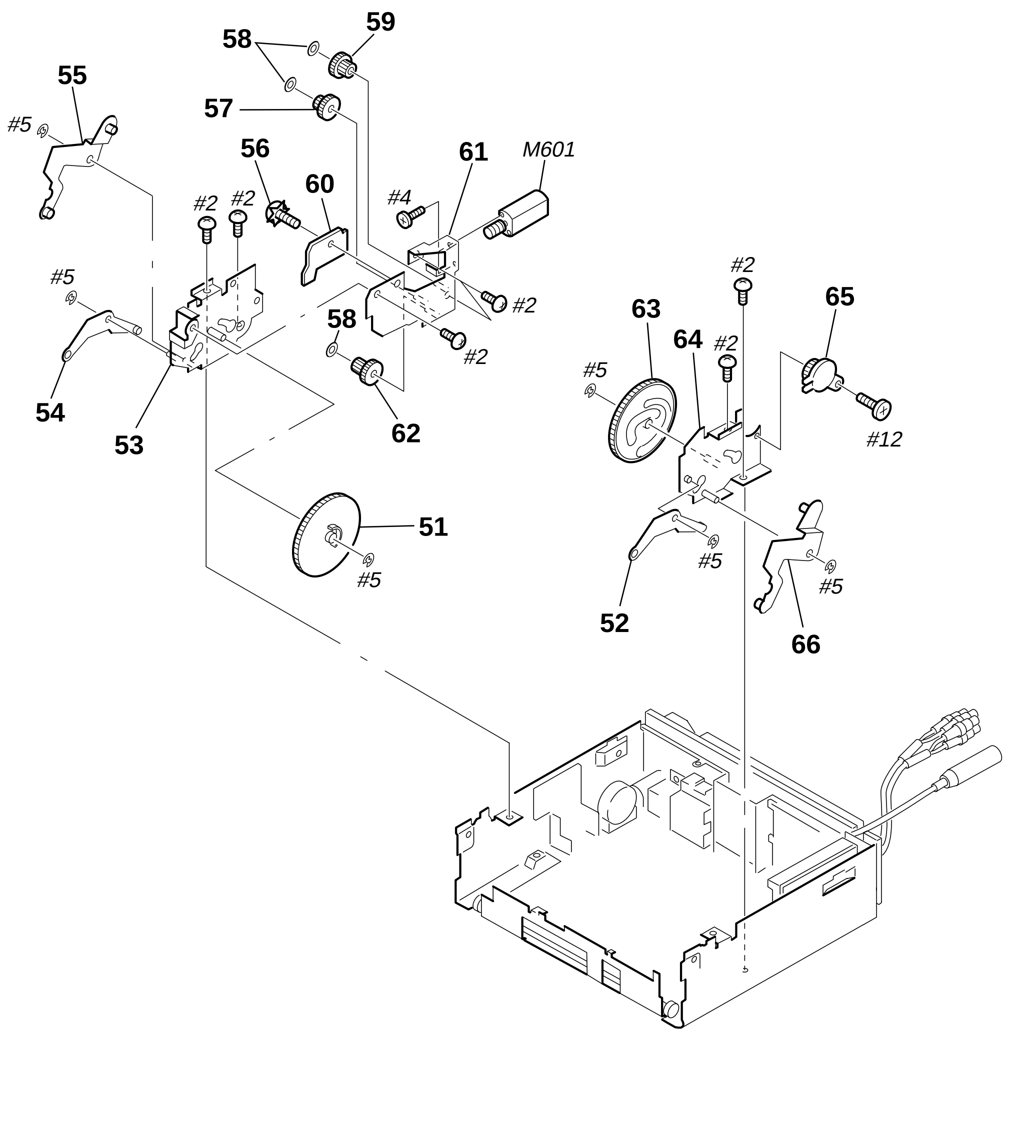
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

5-1. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
* 1	3-230-511-01	COVER	
2	1-776-207-72	CORD (WITH CONNECTOR) (POWER) (US)	
2	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER) (AEP,UK,E)	
3	X-3380-551-1	PANEL (CD) SUB ASSY, SUB (M670:US)	
3	X-3380-552-1	PANEL (CD) SUB ASSY, SUB (M620)	
3	X-3380-554-1	PANEL (CD) SUB ASSY, SUB (AEP,UK,E)	
* 4	1-681-373-11	SUB (CD) BOARD	
5	3-230-515-01	SLIDER (FLEXIBLE)	
6	3-230-514-01	COVER (FLEXIBLE)	
7	3-230-516-01	SPRING (FLEXIBLE), TENSION	
8	3-045-756-01	SCREW (PANEL)	
* 9	3-045-743-01	BRACKET (CD)	
CN901	1-783-268-11	CABLE, FLAT 11P	

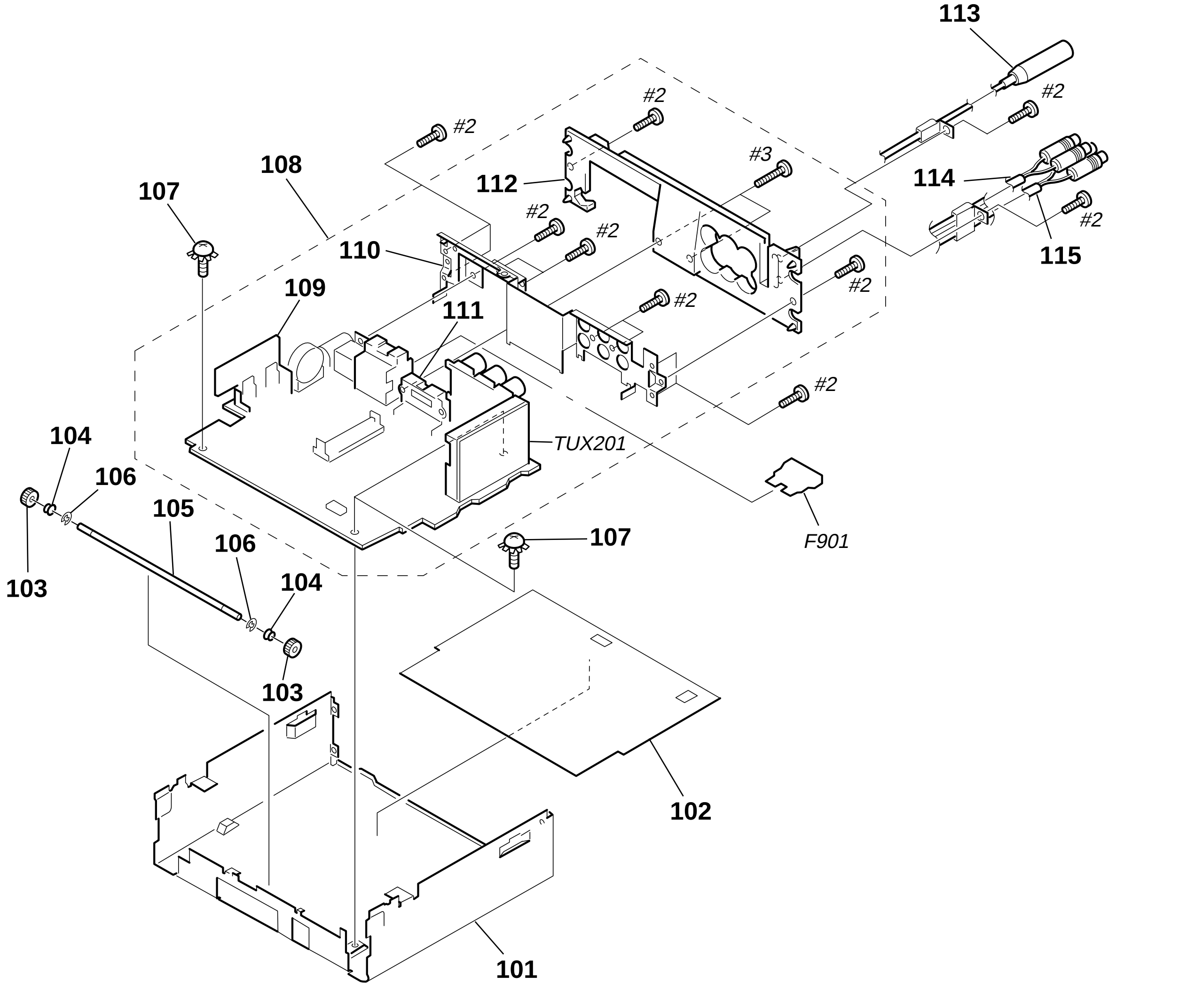
5-2. CAM SECTION



Ref. No.	Part No.	Description	Remark
51	3-230-495-01	CAM (L)	
52	X-3380-549-1	ARM (B-R) ASSY	
53	X-3380-544-1	BRACKET (L) ASSY	
54	X-3380-548-1	ARM (B-L) ASSY	
55	X-3380-546-1	ARM (A-L) ASSY	
56	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
57	3-045-714-01	GEAR (B)	
58	3-342-940-01	WASHER (M)	
59	3-045-713-01	GEAR (A)	

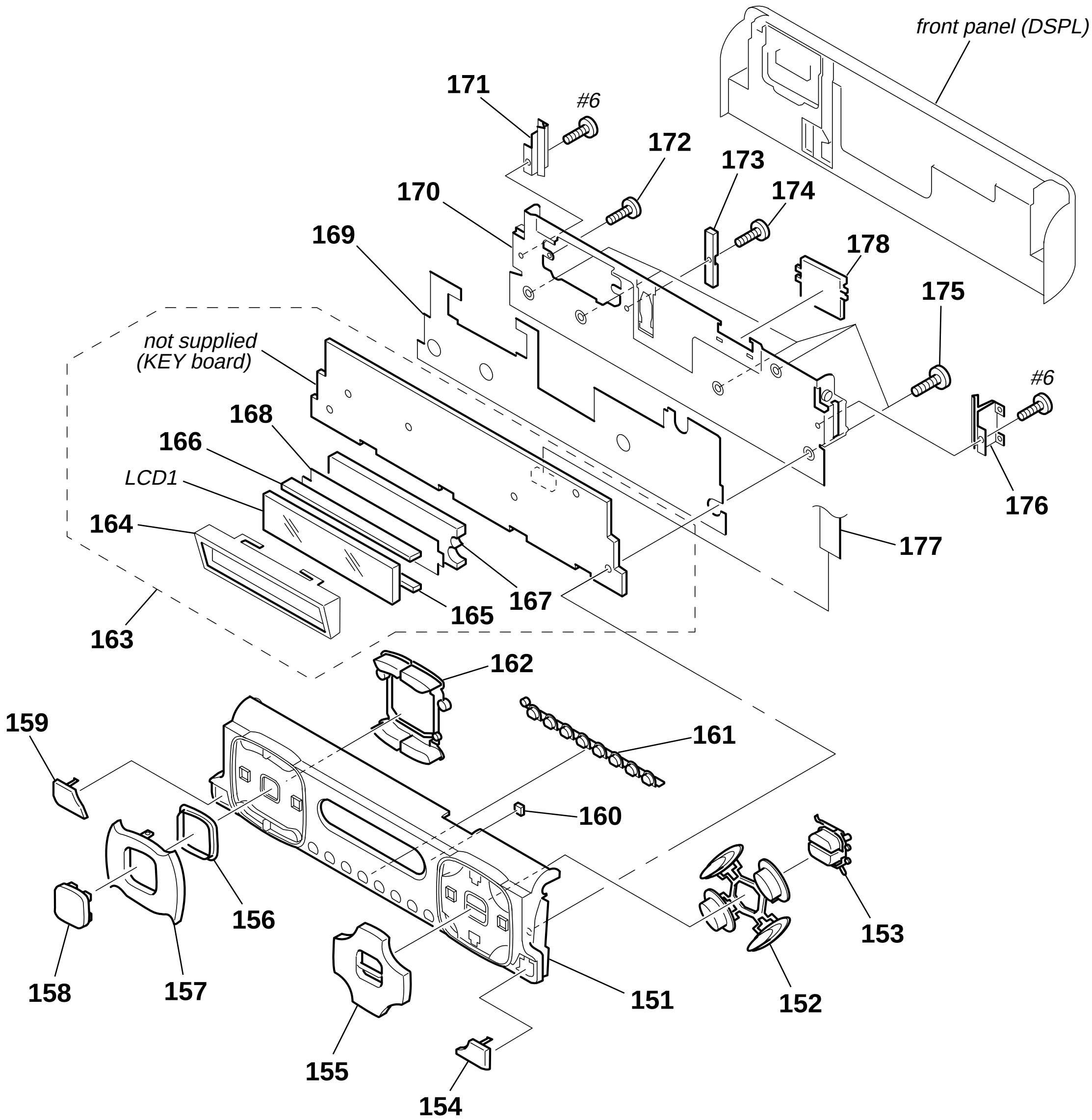
Ref. No.	Part No.	Description	Remark
* 60	1-681-375-11	SW BOARD	
* 61	X-3378-711-1	BRACKET (MOTOR) ASSY	
62	3-230-494-01	GEAR (C)	
63	3-230-496-01	CAM (R)	
64	X-3380-545-1	BRACKET (R) ASSY	
65	3-030-909-11	DAMPER, OIL	
66	X-3380-547-1	ARM (A-R) ASSY	
M601	X-3378-769-1	MOTOR ASSY (OPEN/CLOSE)	

5-3. MAIN BOARD SECTION



Ref. No.	Part No.	Description	Remark
101	X-3380-558-1	CHASSIS (CD) ASSY	
* 102	3-230-417-01	SHEET, INSULATING	
103	3-230-493-01	GEAR (DRIVE SHAFT)	
104	3-230-444-01	GUIDE (DRIVE SHAFT)	
105	3-045-721-01	SHAFT, DRIVE	
106	3-040-692-01	RING, CE TYPE RETAINING	
107	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
* 108	A-3283-172-A	MAIN BOARD, COMPLETE (M670:US)	
* 108	A-3283-173-A	MAIN BOARD, COMPLETE (M620)	
* 108	A-3283-174-A	MAIN BOARD, COMPLETE (AEP,UK,E)	
* 109	3-230-513-01	HEAT SINK (REG)	
* 110	3-230-509-01	CHASSIS, BACK	
* 111	3-019-565-01	BRACKET (IC)	
* 112	3-230-510-21	HEAT SINK (US)	
* 112	3-230-510-31	HEAT SINK (AEP,UK,E)	
113	1-777-246-41	CORD (WITH CONNECTOR) (ANT)	
114	1-790-375-21	CORD (WITH CONNECTOR) (SUB OUT (MONO))	
115	1-757-775-11	CORD (WITH CONNECTOR) (AUX-IN (AUDIO))	
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
TUX201	A-3220-813-A	TUNER UNIT (TUX-020)	

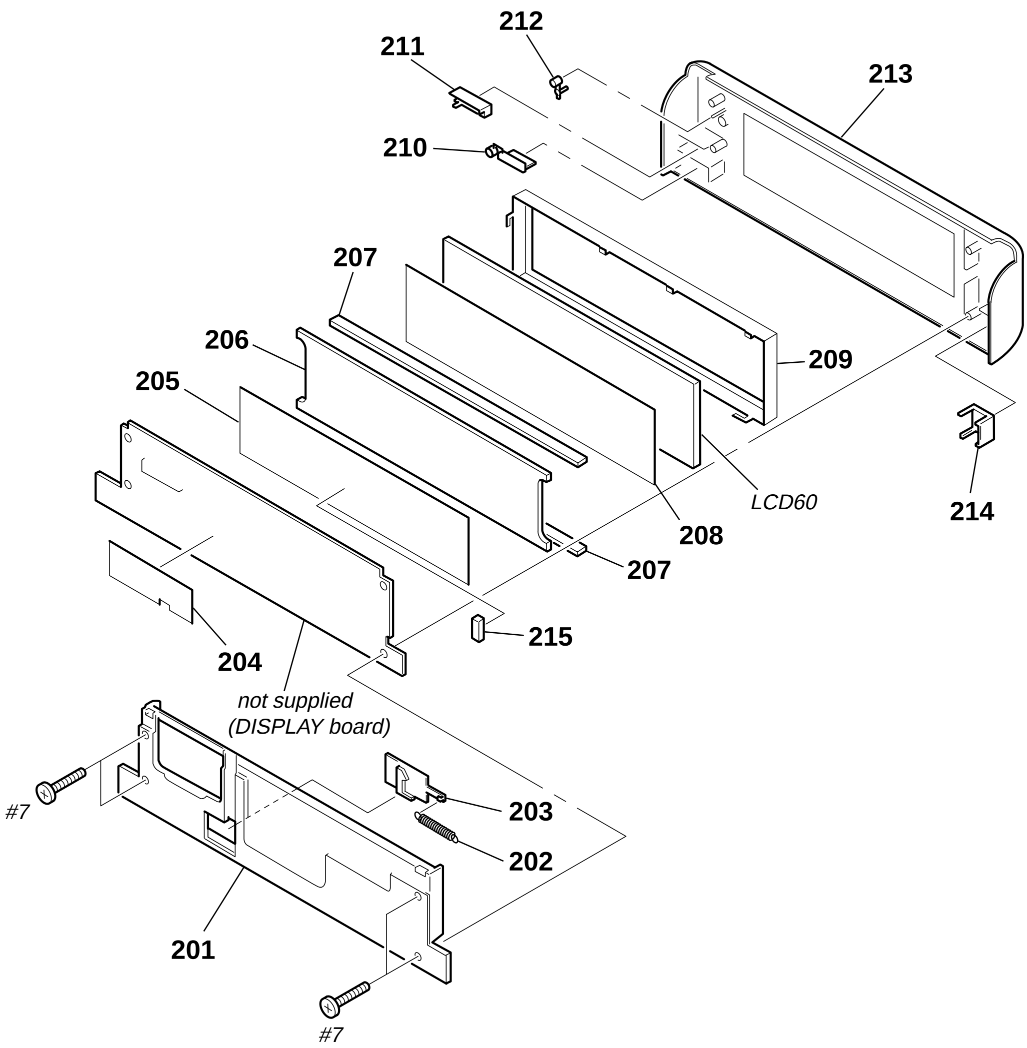
5-4. FRONT PANEL (KEY) ASSY SECTION



Ref. No.	Part No.	Description	Remark
151	X-3380-536-1	PANEL (KEY) SUB ASSY, FRONT (M670:US)	
151	X-3380-537-1	PANEL (KEY) SUB ASSY, FRONT (M620)	
151	X-3380-539-1	PANEL (KEY) SUB ASSY, FRONT (AEP,UK,E)	
152	3-230-483-01	BUTTON (ENTER)	
153	3-230-482-01	BUTTON (EQ7)	
154	3-230-480-01	BUTTON (EJECT)	
155	3-230-481-01	BUTTON (SEEK)	
156	3-230-485-01	PLATE (RING), LIGHT GUIDE	
157	3-230-477-01	BUTTON (+/–)	
158	3-230-478-01	BUTTON (SOURCE)	
159	3-230-484-01	BUTTON (CLOSE)	
160	3-231-433-01	CUSHION (ELECTROSTATIC)	
161	3-230-398-01	BUTTON (6 KEY) (US)	
161	3-230-398-11	BUTTON (6 KEY) (AEP,UK,E)	
162	3-230-479-01	BUTTON (MODE) (US)	
162	3-230-479-11	BUTTON (MODE) (AEP,UK,E)	
* 163	A-3283-164-A	KEY BOARD, COMPLETE (US)	
* 163	A-3283-176-A	KEY BOARD, COMPLETE (AEP,UK,E)	

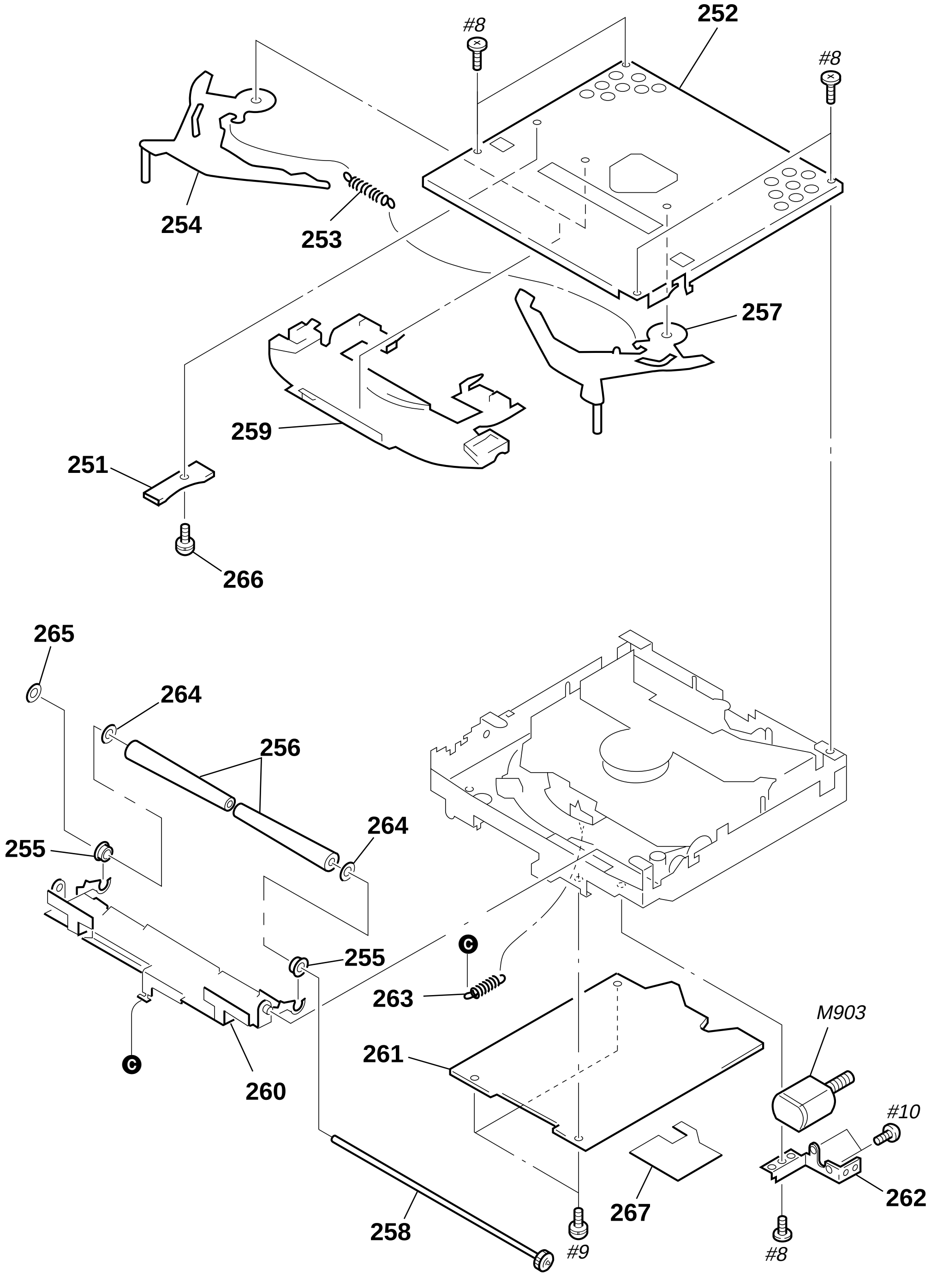
Ref. No.	Part No.	Description	Remark
* 164	3-230-486-01	HOLDER (LCD-KEY)	
165	1-694-808-21	CONDUCTIVE BOARD, CONNECTION	
166	1-694-807-21	CONDUCTIVE BOARD, CONNECTION	
* 167	3-230-487-01	PLATE (LCD-KEY), LIGHT GUIDE	
* 168	3-230-488-01	SHEET (LCD-KEY), DIFFUSION	
* 169	3-230-415-01	SHEET (KEY), INSULATING	
170	X-3380-543-1	PANEL ASSY, BASE	
171	X-3380-560-1	SPRING (DETOUCH L) ASSY	
172	3-063-745-11	SCREW (+P M2 B TITE)	
173	3-230-490-01	GUIDE (DETOUCH)	
174	2-134-636-31	SCREW (M1.7X2.5)	
175	3-230-416-01	SCREW	
176	X-3380-561-1	SPRING (DETOUCH R) ASSY	
177	1-681-390-11	FLEXIBLE BOARD	
178	3-230-491-01	GUIDE (FLEXIBLE)	
LCD1	1-804-349-11	DISPLAY PANEL, LIQUID CRYSTAL	

5-5. FRONT PANEL (DSPL) ASSY SECTION



Ref. No.	Part No.	Description	Remark
201	3-230-470-01	PANEL (FRONT BACK)	
202	3-230-472-01	SPRING (LOCK), TENSION	
203	3-230-471-01	LOCK (DETOUCH)	
204	3-230-378-01	SHEET, INSULATING	
* 205	3-230-469-01	SHEET (DSPL), REFLECTION	
* 206	3-230-467-01	PLATE (LCD-DSPL), LIGHT GUIDE	
207	1-694-806-21	CONDUCTIVE BOARD, CONNECTION	
* 208	3-230-468-01	SHEET (DSPL), DIFFUSION	
* 209	3-230-466-01	HOLDER (LCD-DSPL)	
210	3-230-426-01	BUTTON (OPEN)	
211	3-230-422-01	PLATE (LOGO), LIGHT GUIDE	
212	3-230-427-01	BUTTON (RESET-DSPL)	
213	X-3380-903-1	PANEL SUB (DSPL) ASSY, FRONT	
214	3-230-423-01	FILTER (IR-DSPL)	
215	3-232-858-01	CUSHION (LIGHT GUIDE PLATE)	
LCD60	1-804-348-11	DISPLAY PANEL, LIQUID CRYSTAL	

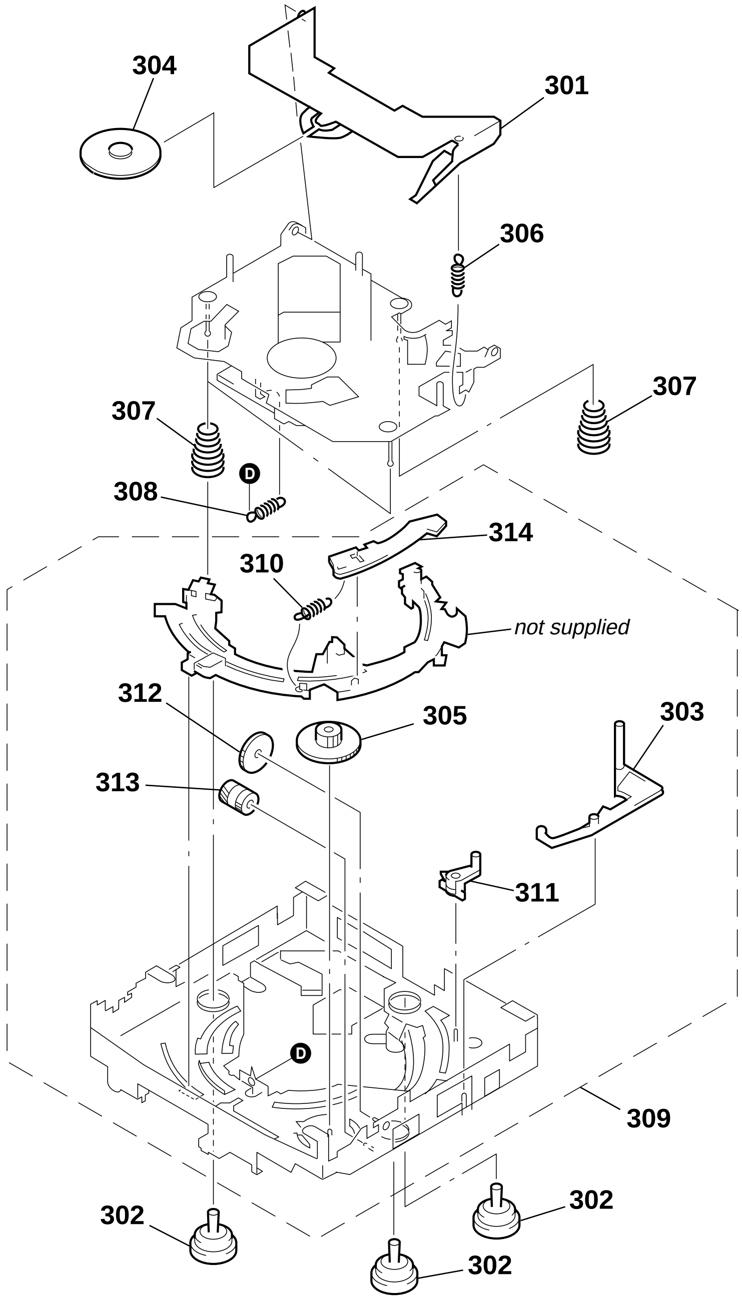
5-6. CD MECHANISM SECTION (1)
(MG-383Z-121//K)



Ref. No.	Part No.	Description	Remark
* 251	1-676-709-11	DISC IN SW BOARD	
252	3-040-039-01	CHASSIS (T)	
253	3-040-038-01	SPRING (LR), TENSION	
254	3-040-050-01	LEVER (L)	
255	3-040-022-01	RETAINER (ROLLER), SHAFT	
256	3-040-044-01	ROLLER (S)	
257	3-040-067-01	LEVER (R)	
258	A-3301-980-A	SHAFT ROLLER ASSY	
259	3-040-037-01	GUIDE (DISC)	

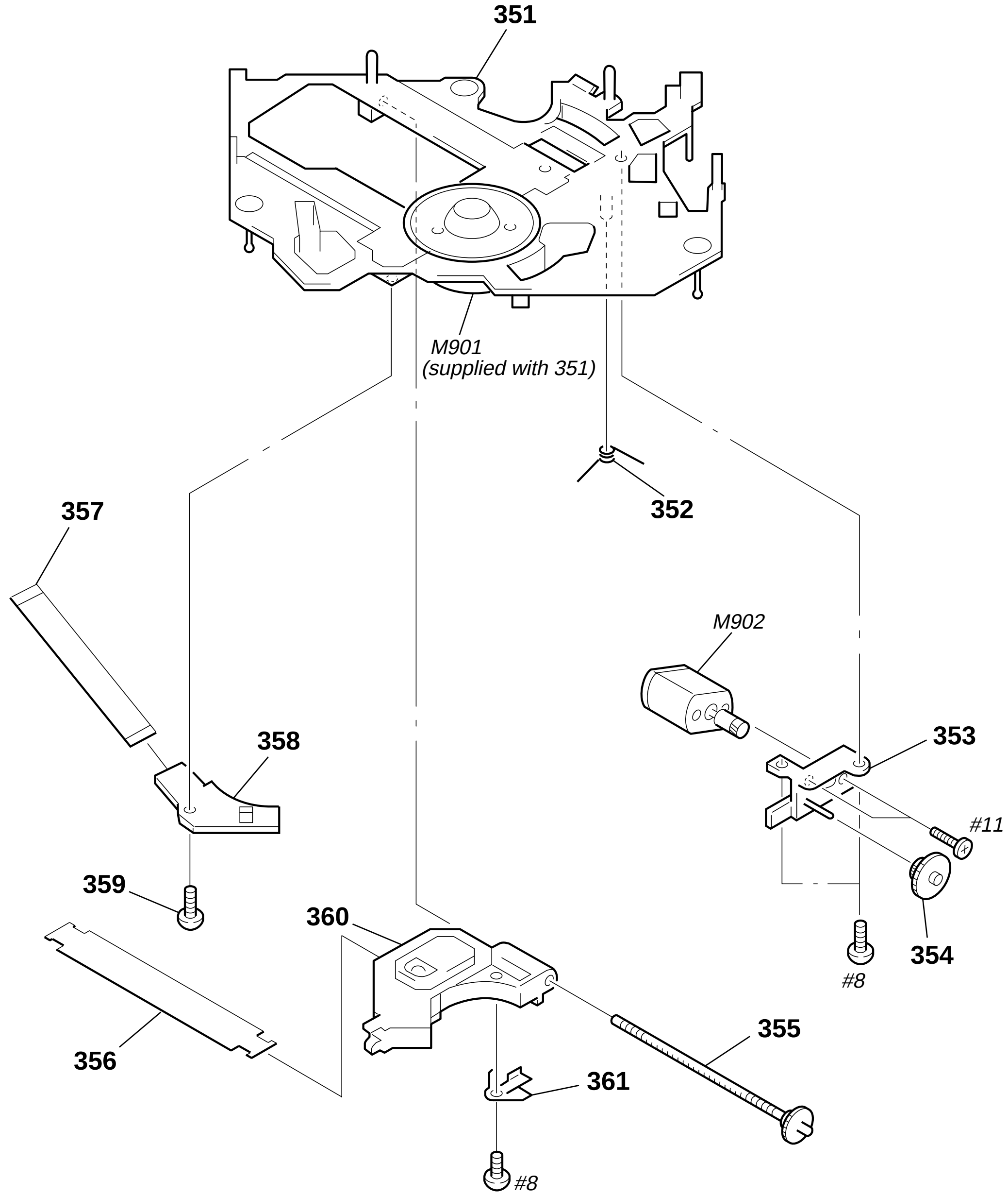
Ref. No.	Part No.	Description	Remark
260	3-040-040-01	ARM (ROLLER)	
* 261	A-3294-809-A	SERVO BOARD, COMPLETE	
262	3-221-779-01	BRACKET (MOTOR)	
263	3-040-034-01	SPRING (RA), TENSION	
264	3-040-042-01	WASHER	
265	3-043-880-01	RING (RA), RETAINING	
266	3-044-206-11	SCREW, SPECIAL	
267	3-231-392-01	PLATE (CD), SHIELD	
M903	A-3315-039-A	MOTOR SUB ASSY, LO (LOADING)	

5-7. CD MECHANISM SECTION (2)
(MG-383Z-121//K)



Ref. No.	Part No.	Description	Remark
301	3-040-025-01	ARM, CHUCKING	
302	3-040-031-01	DAMPER (T)	
303	3-040-056-01	LEVER (D)	
304	3-040-024-01	RETAINER (DISC)	
305	3-040-054-01	WHEEL (LW), WORM	
306	3-040-026-01	SPRING (CH), TENSION	
307	3-040-032-01	SPRING (FL), COMPRESSION	
308	3-040-033-01	SPRING (KF1), TENSION	
309	A-3307-422-A	CHASSIS (M) COMPLETE ASSY	
310	3-040-059-01	SPRING (TR), TENSION	
311	3-040-057-01	LEVER (LOCK)	
312	3-040-058-01	GEAR (MDL)	
313	3-040-052-01	WHEEL (U), WORM	
314	3-040-051-01	LEVER (TR)	

5-8. CD MECHANISM SECTION (3)
(MG-383Z-121//K)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
351	X-3378-480-1	CHASSIS (OP) ASSY (including M901)	
352	3-040-029-01	SPRING (SL), TORSION	
353	3-040-045-01	BASE (DRIVING)	
354	3-040-194-01	GEAR (MIDWAY)	
355	A-3301-983-A	SHAFT (FEED) ASSY	
356	1-676-707-11	PICK-UP FLEXIBLE BOARD	
357	1-677-182-11	MOTOR FLEXIBLE BOARD	
* 358	1-676-708-11	LIMIT SW BOARD	
359	3-909-607-01	SCREW	
⚠360	8-820-103-03	PICK-UP, OPTICAL KSS-720A/K1RP	
361	3-040-030-01	SPRING (FEED), PLATE	
M902	A-3301-985-A	MOTOR ASSY, SLED (SLED)	

DISPLAY

SECTION 6
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example:
  uA.. : μA.. uPA.. : μPA..
  uPB.. : μPB.. uPC.. : μPC.. uPD.. : μPD..
- CAPACITORS
  uF : μF
- COILS
  uH : μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description				Remark
		DISPLAY BOARD				
		**************				
	1-694-806-21	CONDUCTIVE BOARD, CONNECTION				
	3-230-378-01	SHEET, INSULATING				
*	3-230-466-01	HOLDER (LCD-DSPL)				
*	3-230-467-01	PLATE (LCD-DSPL), LIGHT GUIDE				
*	3-230-468-01	SHEET (DSPL), DIFFUSION				
*	3-230-469-01	SHEET (DSPL), REFLECTION				
		< CAPACITOR >				
C60	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C61	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C62	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C63	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C64	1-115-412-11	CERAMIC CHIP	680PF	5%	25V	
C65	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	
C66	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	
C67	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	
C70	1-115-412-11	CERAMIC CHIP	680PF	5%	25V	
C71	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	
C72	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	
C73	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	
C74	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C75	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C76	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C77	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C78	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C79	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V	
C80	1-164-388-11	CERAMIC CHIP	270PF	5%	50V	
C81	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
		< CONNECTOR >				
CN60	1-815-500-21	PLUG, CONNECTOR 15P				
		< DIODE >				
D61	8-719-422-41	DIODE MA8051-L-TX				
D62	8-719-977-12	DIODE KDZ6.8V				
D63	8-719-977-12	DIODE KDZ6.8V				
D64	8-719-977-12	DIODE KDZ6.8V				
D65	8-719-977-12	DIODE KDZ6.8V				
D66	8-719-977-12	DIODE KDZ6.8V				
D67	8-719-420-14	DIODE MA8082-M(TX)				
D68	8-719-977-12	DIODE KDZ6.8V				
D70	8-719-083-14	DIODE RRX9000-0501				

Ref. No.	Part No.	Description				Remark
		< FERRITE BEAD >				
FB60	1-500-329-21	INDUCTOR, FERRITE BEAD				
		< IC >				
IC60	8-759-653-26	IC LC75878W				
IC61	8-759-653-26	IC LC75878W				
IC62	8-759-830-18	IC RRX9000-0601#1				
		< LIQUID CRYSTAL DISPLAY >				
LCD60	1-804-348-11	DISPLAY PANEL, LIQUID CRYSTAL				
		< DIODE >				
LED60	8-719-079-49	LED LWT673-R1S2-34 (SONY)				
LED62	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)				
LED63	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)				
LED64	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)				
LED65	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)				
LED66	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)				
LED67	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)				
LED68	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)				
LED69	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)				
		< SWITCH >				
LSW60	1-771-883-11	SWITCH, TACTILE (WITH LED) (OPEN)				
		< TRANSISTOR >				
Q60	8-729-106-60	TRANSISTOR 2SB1132-T101-QR				
Q61	8-729-038-67	TRANSISTOR KRC102S				
Q62	8-729-904-66	TRANSISTOR DTD113EK-T-146				
		< RESISTOR >				
R60	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R61	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R62	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R63	1-216-037-00	METAL CHIP	330	5%	1/10W	
R64	1-216-037-00	METAL CHIP	330	5%	1/10W	
R65	1-216-025-11	RES-CHIP	100	5%	1/10W	
R66	1-216-025-11	RES-CHIP	100	5%	1/10W	
R67	1-216-025-11	RES-CHIP	100	5%	1/10W	
R68	1-216-025-11	RES-CHIP	100	5%	1/10W	
R69	1-216-033-00	METAL CHIP	220	5%	1/10W	
R70	1-216-864-11	SHORT	0			
R71	1-216-033-00	METAL CHIP	220	5%	1/10W	

Ref. No.	Part No.	Description			Remark
R72	1-216-811-11	METAL CHIP	150	5%	1/16W
R73	1-216-805-11	METAL CHIP	47	5%	1/16W
R74	1-216-864-11	SHORT	0		
R76	1-216-841-11	METAL CHIP	47K	5%	1/16W
R77	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R78	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R79	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R80	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R81	1-216-817-11	METAL CHIP	470	5%	1/16W
R82	1-216-809-11	METAL CHIP	100	5%	1/16W
R83	1-216-809-11	METAL CHIP	100	5%	1/16W
R84	1-216-809-11	METAL CHIP	100	5%	1/16W
R85	1-216-841-11	METAL CHIP	47K	5%	1/16W
R86	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R87	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R88	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R89	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R90	1-216-809-11	METAL CHIP	100	5%	1/16W
R91	1-216-809-11	METAL CHIP	100	5%	1/16W
R92	1-216-809-11	METAL CHIP	100	5%	1/16W
R93	1-216-817-11	METAL CHIP	470	5%	1/16W
R94	1-216-864-11	SHORT	0		
R95	1-216-846-11	METAL CHIP	120K	5%	1/16W
R96	1-216-850-11	METAL CHIP	270K	5%	1/16W
R97	1-216-033-00	METAL CHIP	220	5%	1/10W
		< SWITCH >			
S60	1-771-884-11	SWITCH, TACTILE (WITH LED) (RESET)			
**					
*	1-676-709-11	DISC IN SW BOARD			
		****************			
		< SWITCH >			
SW2	1-529-566-21	SWITCH, PUSH (1 KEY) (SELF)			
SW3	1-529-566-21	SWITCH, PUSH (1 KEY) (DISC IN)			
**					
*	A-3283-164-A	KEY BOARD, COMPLETE (US)			
*	A-3283-176-A	KEY BOARD, COMPLETE (AEP,UK,E)			
		********************			
	1-694-807-21	CONDUCTIVE BOARD, CONNECTION			
	1-694-808-21	CONDUCTIVE BOARD, CONNECTION			
*	3-230-486-01	HOLDER (LCD-KEY)			
*	3-230-487-01	PLATE (LCD-KEY), LIGHT GUIDE			
*	3-230-488-01	SHEET (LCD-KEY), DIFFUSION			
		< CAPACITOR >			
C1	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C3	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C4	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C5	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C6	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V

Ref. No.	Part No.	Description			Remark
C7	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C8	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C9	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C10	1-162-974-11	CERAMIC CHIP	0.01uF		50V
		< CONNECTOR >			
CN1	1-815-499-21	CONNECTOR, FPC (ZIF) 18P			
CN2	1-815-501-11	SOCKET, CONNECTOR 15P			
		< DIODE >			
D7	8-719-422-41	DIODE MA8051-L-TX			
D8	8-719-422-80	DIODE MA8075-H-TX			
		< IC >			
IC1	8-759-653-26	IC LC75878W			
		< LIQUID CRYSTAL DISPLAY >			
LCD1	1-804-349-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< DIODE >			
LED1	8-719-079-26	LED NSSB440-WRST-THR (LCD BACK LIGHT)			
LED2	8-719-079-26	LED NSSB440-WRST-THR (LCD BACK LIGHT)			
LED3	8-719-078-39	LED CL-170SR-CD-T (RING ILLUMINATION)			
LED4	8-719-078-39	LED CL-170SR-CD-T (RING ILLUMINATION)			
LED5	8-719-078-39	LED CL-170SR-CD-T (RING ILLUMINATION)			
LED6	8-719-078-39	LED CL-170SR-CD-T (RING ILLUMINATION)			
LED7	8-719-078-39	LED CL-170SR-CD-T (CLOSE)			
LED8	8-719-078-39	LED CL-170SR-CD-T (MODE)			
LED9	8-719-078-39	LED CL-170SR-CD-T (⏏)			
LED10	8-719-078-39	LED CL-170SR-CD-T (OFF)			
LED11	8-719-078-39	LED CL-170SR-CD-T (DSPL/PTY)			
LED12	8-719-078-39	LED CL-170SR-CD-T (SCRL)			
LED13	8-719-078-39	LED CL-170SR-CD-T (ENTER)			
LED14	8-719-078-39	LED CL-170SR-CD-T (LIST)			
LED15	8-719-078-39	LED CL-170SR-CD-T (MENU)			
LED16	8-719-078-39	LED CL-170SR-CD-T (SOUND)			
LED17	8-719-078-09	LED SLR-332CD-T32MN (DSO)			
LED18	8-719-078-09	LED SLR-332CD-T32MN (EQ7)			
		< SWITCH >			
LSW1	1-771-883-11	SWITCH, TACTILE (WITH LED) (–)			
LSW2	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (SOURCE)			
LSW5	1-771-883-11	SWITCH, TACTILE (WITH LED) (+)			
LSW6	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (AF)			(AEP,UK,E)
LSW7	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (1/REP)			
LSW8	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (2/SHUF)			
LSW9	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (3)			
LSW10	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (6)			
LSW11	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (5)			
LSW12	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (4)			
LSW13	1-771-883-11	SWITCH, TACTILE (WITH LED) (⏮ ◀◀)			

KEY **LIMIT SW**

Ref. No.	Part No.	Description			Remark
LSW15	1-771-476-11	SWITCH, KEYBOARD (WITH LED) (TA)			(AEP,UK,E)
LSW18	1-771-883-11	SWITCH, TACTILE (WITH LED) (DISC –)			
LSW20	1-771-883-11	SWITCH, TACTILE (WITH LED) (DISC +)			
LSW22	1-771-883-11	SWITCH, TACTILE (WITH LED) (▶▶I ▶▶)			
		< TRANSISTOR >			
Q1	8-729-106-60	TRANSISTOR 2SB1132-T101-QR			
Q2	8-729-038-67	TRANSISTOR KRC102S			
Q3	8-729-904-66	TRANSISTOR DTD113EK-T-146			
		< RESISTOR >			
R1	1-216-837-11	METAL CHIP	22K	5%	1/16W
R2	1-216-835-11	METAL CHIP	15K	5%	1/16W
R3	1-216-833-11	METAL CHIP	10K	5%	1/16W
R4	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R5	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R6	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R7	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R8	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R9	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R10	1-216-821-11	METAL CHIP	1K	5%	1/16W
R11	1-216-819-11	METAL CHIP	680	5%	1/16W
R12	1-216-819-11	METAL CHIP	680	5%	1/16W
R13	1-216-819-11	METAL CHIP	680	5%	1/16W
R14	1-216-837-11	METAL CHIP	22K	5%	1/16W
R15	1-216-835-11	METAL CHIP	15K	5%	1/16W
R16	1-216-833-11	METAL CHIP	10K	5%	1/16W
R17	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R18	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R19	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R20	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R21	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R22	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R23	1-216-821-11	METAL CHIP	1K	5%	1/16W
R24	1-216-819-11	METAL CHIP	680	5%	1/16W
R25	1-216-819-11	METAL CHIP	680	5%	1/16W
R26	1-216-819-11	METAL CHIP	680	5%	1/16W
R27	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R28	1-216-833-11	METAL CHIP	10K	5%	1/16W
R29	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R30	1-216-815-11	METAL CHIP	330	5%	1/16W
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-025-11	RES-CHIP	100	5%	1/10W
R33	1-216-807-11	METAL CHIP	68	5%	1/16W
R34	1-216-035-00	METAL CHIP	270	5%	1/10W
R35	1-216-035-00	METAL CHIP	270	5%	1/10W
R36	1-216-817-11	METAL CHIP	470	5%	1/16W
R37	1-216-029-00	METAL CHIP	150	5%	1/10W
R38	1-216-809-11	METAL CHIP	100	5%	1/16W
R39	1-216-809-11	METAL CHIP	100	5%	1/16W
R40	1-216-809-11	METAL CHIP	100	5%	1/16W
R41	1-216-841-11	METAL CHIP	47K	5%	1/16W
R42	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R43	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R44	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R45	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R46	1-216-025-11	RES-CHIP	100	5%	1/10W (US)
R47	1-216-029-00	METAL CHIP	150	5%	1/10W
R48	1-216-029-00	METAL CHIP	150	5%	1/10W
R49	1-216-029-00	METAL CHIP	150	5%	1/10W
R50	1-216-025-11	RES-CHIP	100	5%	1/10W (US)
R51	1-216-029-00	METAL CHIP	150	5%	1/10W
R52	1-216-029-00	METAL CHIP	150	5%	1/10W
R53	1-216-029-00	METAL CHIP	150	5%	1/10W
R54	1-216-029-00	METAL CHIP	150	5%	1/10W
R55	1-216-029-00	METAL CHIP	150	5%	1/10W
		< SWITCH >			
S1	1-786-101-11	SWITCH, DETECTION (DETOUCH)			
S2	1-771-884-11	SWITCH, TACTILE (WITH LED) (CLOSE)			
S3	1-692-135-21	SWITCH, KEYBOARD (MODE)			
S4	1-771-884-11	SWITCH, TACTILE (WITH LED) (⏏)			
S7	1-692-135-21	SWITCH, KEYBOARD (OFF)			
S8	1-692-135-21	SWITCH, KEYBOARD (SCRL)			
S9	1-692-135-21	SWITCH, KEYBOARD (DSPL/PTY)			
S10	1-692-135-21	SWITCH, KEYBOARD (ENTER)			
S11	1-692-135-21	SWITCH, KEYBOARD (LIST)			
S12	1-692-135-21	SWITCH, KEYBOARD (MENU)			
S13	1-692-135-21	SWITCH, KEYBOARD (SOUND)			
S14	1-771-884-11	SWITCH, TACTILE (WITH LED) (DSO)			
S15	1-771-884-11	SWITCH, TACTILE (WITH LED) (EQ7)			

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Ref. No.	Part No.	Description	Remark
*	1-676-708-11	LIMIT SW BOARD ***************	
		< CONNECTOR >	
CN13	1-770-347-21	CONNECTOR, FPC 6P	
		< SWITCH >	
SW4	1-529-565-11	SWITCH, PUSH (1 KEY) (LIMIT)	

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Ref. No.	Part No.	Description			Remark
*	A-3283-172-A	MAIN BOARD, COMPLETE (M670:US)			
*	A-3283-173-A	MAIN BOARD, COMPLETE (M620)			
*	A-3283-174-A	MAIN BOARD, COMPLETE (AEP,UK,E)			
		*********************			
*	3-019-565-01	BRACKET (IC)			
*	3-230-509-01	CHASSIS, BACK			
*	3-230-510-21	HEAT SINK (US)			
*	3-230-510-31	HEAT SINK (AEP,UK,E)			
*	3-230-513-01	HEAT SINK (REG)			
	7-685-792-09	SCREW +PTT 2.6X6 (S)			
	7-685-794-09	SCREW +PTT 2.6X10 (S)			
		< BUZZER >			
BZ501	1-504-920-11	BUZZER			
		< CAPACITOR >			
C51	1-162-919-11	CERAMIC CHIP	22PF	5%	50V (M670:US)
C52	1-162-919-11	CERAMIC CHIP	22PF	5%	50V (M670:US)
C53	1-162-919-11	CERAMIC CHIP	22PF	5%	50V (M670:US)
C54	1-162-919-11	CERAMIC CHIP	22PF	5%	50V (M670:US)
C55	1-162-919-11	CERAMIC CHIP	22PF	5%	50V (M670:US)
C57	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C58	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C101	1-124-570-11	ELECT	220uF	20%	16V
C103	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C104	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C105	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C106	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C107	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C108	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C109	1-126-176-11	ELECT	220uF	20%	10V
C110	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C111	1-115-156-11	CERAMIC CHIP	1uF		10V
C112	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C113	1-126-176-11	ELECT	220uF	20%	10V
C115	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C116	1-126-176-11	ELECT	220uF	20%	10V
C117	1-126-176-11	ELECT	220uF	20%	10V
C118	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C119	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C120	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C121	1-128-057-11	ELECT	330uF	20%	6.3V
C122	1-110-654-11	DOUBLE LAYERS	0.047F		5.5V
C123	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C124	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C125	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C126	1-124-937-11	ELECT	10uF	20%	16V
C127	1-164-156-11	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remark
C128	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C201	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C202	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C205	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C206	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C207	1-124-589-11	ELECT	47uF	20%	16V
C208	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C209	1-104-942-11	ELECT	1uF	20%	50V
C210	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (AEP,UK,E)
C211	1-164-360-11	CERAMIC CHIP	0.1uF		16V (AEP,UK,E)
C212	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (AEP,UK,E)
C213	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (AEP,UK,E)
C214	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V (AEP,UK,E)
C215	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V (AEP,UK,E)
C216	1-104-664-11	ELECT	47uF	20%	10V (AEP,UK,E)
C217	1-164-315-11	CERAMIC CHIP	470PF	5%	50V (AEP,UK,E)
C218	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (AEP,UK,E)
C219	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (AEP,UK,E)
C220	1-162-924-11	CERAMIC CHIP	56PF	5%	50V (AEP,UK,E)
C221	1-162-924-11	CERAMIC CHIP	56PF	5%	50V (AEP,UK,E)
C222	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V (AEP,UK,E)
C223	1-164-315-11	CERAMIC CHIP	470PF	5%	50V (AEP,UK,E)
C224	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (AEP,UK,E)
C225	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (AEP,UK,E)
C226	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (AEP,UK,E)
C227	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V (AEP,UK,E)
C228	1-162-959-11	CERAMIC CHIP	330PF	5%	50V (AEP,UK,E)
C229	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V (AEP,UK,E)
C230	1-164-739-11	CERAMIC CHIP	560PF	5%	50V (AEP,UK,E)
C231	1-124-233-11	ELECT	10uF	20%	16V
C301	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C302	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C303	1-136-154-00	FILM	0.012uF	5%	50V
C304	1-136-154-00	FILM	0.012uF	5%	50V
C305	1-124-233-11	ELECT	10uF	20%	16V

MAIN

Ref. No.	Part No.	Description			Remark
C306	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C307	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C308	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C309	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
					(M670:US)
C310	1-164-156-11	CERAMIC CHIP	0.1uF		25V
					(M670:US)
C311	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
					(M670:US)
C312	1-164-156-11	CERAMIC CHIP	0.1uF		25V
					(M670:US)
C313	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C314	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C315	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C316	1-124-937-11	ELECT	10uF	20%	16V
C317	1-124-233-11	ELECT	10uF	20%	16V
C318	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C319	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C320	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C321	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
					(M670:US)
C322	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
					(M670:US)
C323	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C324	1-124-233-11	ELECT	10uF	20%	16V
C325	1-126-157-11	ELECT	10uF	20%	16V
C328	1-124-233-11	ELECT	10uF	20%	16V
C329	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C332	1-127-573-11	CERAMIC CHIP	1uF	10%	16V
C333	1-127-573-11	CERAMIC CHIP	1uF	10%	16V
C334	1-124-234-00	ELECT	22uF	20%	16V
					(M670:US)
C335	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C336	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
					(M670:US)
C337	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
					(EXCEPT M670:US)
C337	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
					(M670:US)
C338	1-127-573-11	CERAMIC CHIP	1uF	10%	16V
C339	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
					(M670:US)
C340	1-124-234-00	ELECT	22uF	20%	16V
					(M670:US)
C341	1-127-573-11	CERAMIC CHIP	1uF	10%	16V
C342	1-124-234-00	ELECT	22uF	20%	16V
					(M670:US)
C343	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C344	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
					(EXCEPT M670:US)
C344	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
					(M670:US)
C345	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C346	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
					(M670:US)
C347	1-124-465-00	ELECT	0.47uF	20%	50V
C348	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
					(EXCEPT M670:US)
C348	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
					(M670:US)
C349	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C350	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C351	1-164-156-11	CERAMIC CHIP	0.1uF		25V
					(M670:US)
C352	1-164-156-11	CERAMIC CHIP	0.1uF		25V
					(M670:US)
C353	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C354	1-162-974-11	CERAMIC CHIP	0.01uF		50V
					(M670:US)
C355	1-164-156-11	CERAMIC CHIP	0.1uF		25V
					(M670:US)
C356	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
					(M670:US)
C357	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
					(EXCEPT M670:US)
C357	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
					(M670:US)
C358	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C359	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C360	1-126-382-11	ELECT	100uF	20%	16V
C361	1-124-233-11	ELECT	10uF	20%	16V
					(EXCEPT M670:US)
C361	1-126-786-11	ELECT	47uF	20%	16V
					(M670:US)
C362	1-164-156-11	CERAMIC CHIP	0.1uF		25V
					(M670:US)
C363	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C364	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C365	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C366	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C371	1-104-942-11	ELECT	1uF	20%	50V
C372	1-126-157-11	ELECT	10uF	20%	16V
					(M670:US)
C373	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C374	1-126-786-11	ELECT	47uF	20%	16V
C375	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C376	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C377	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C378	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C379	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C380	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C381	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C382	1-126-176-11	ELECT	220uF	20%	10V
C383	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C384	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C385	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C386	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C387	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C388	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C403	1-135-473-21	ELECT	3300uF	20%	16V
C406	1-127-573-11	CERAMIC CHIP	1uF	10%	16V

Ref. No.	Part No.	Description			Remark
C407	1-126-572-11	ELECT	4.7uF	20%	35V
C451	1-124-234-00	ELECT	22uF	20%	16V
C452	1-124-234-00	ELECT	22uF	20%	16V
C454	1-128-057-11	ELECT	330uF	20%	6.3V
C455	1-124-234-00	ELECT	22uF	20%	16V
C456	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C457	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C501	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V (AEP,UK,E)
C501	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V (US)
C502	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C503	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C505	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C506	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C507	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C508	1-164-160-11	CERAMIC CHIP	20PF	5%	50V
C509	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C510	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C511	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C512	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C513	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C514	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C515	1-124-584-00	ELECT	100uF	20%	10V
C516	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C517	1-164-160-11	CERAMIC CHIP	20PF	5%	50V
C602	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C603	1-126-934-11	ELECT	220uF	20%	16V
C650	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C651	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C652	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C653	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C655	1-124-589-11	ELECT	47uF	20%	16V
C656	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C657	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C658	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C659	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C660	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C701	1-124-589-11	ELECT	47uF	20%	16V
C703	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C704	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C705	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C706	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C707	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C708	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C709	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C710	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C711	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C712	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C801	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C802	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C813	1-115-156-11	CERAMIC CHIP	1uF		10V
C814	1-164-156-11	CERAMIC CHIP	0.1uF		25V

	Ref. No.	Part No.	Description	Remark
			< CONNECTOR >	
	CN101	1-774-701-11	PIN, CONNECTOR 16P	
*	CN201	1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P	
*	CN301	1-506-985-11	PIN, CONNECTOR (PC BOARD) 3P	
	CN401	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P	
	CN601	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)	
	CN602	1-568-955-11	PIN, CONNECTOR 6P	
	CN603	1-563-614-31	CONNECTOR, FLEXIBLE 11P	
	CN604	1-815-499-21	CONNECTOR, FPC (ZIF) 18P	
			< JACK >	
	CN302	1-774-700-11	JACK, PIN 6P (BUS AUDIO IN, AUDIO OUT REAR/FRONT)	
			< DIODE >	
	D101	8-719-055-30	DIODE D1FS4A-TA	
	D102	8-719-055-30	DIODE D1FS4A-TA	
	D104	8-719-801-78	DIODE 1SS184	
	D105	8-719-060-81	DIODE MA735-TX	
	D106	8-719-053-18	DIODE 1SR154-400TE-25	
	D107	8-719-422-62	DIODE MA8062-L-TX	
	D109	8-719-977-03	DIODE DTZ5.6B	
	D202	8-719-988-61	DIODE 1SS355TE-17	
	D203	8-719-422-41	DIODE MA8051-L-TX	
	D204	8-719-800-76	DIODE MA153-TX (AEP,UK,E)	
	D205	8-719-422-41	DIODE MA8051-L-TX (AEP,UK,E)	
	D301	8-719-074-47	DIODE CRS02(TE85L)	
	D302	8-719-074-47	DIODE CRS02(TE85L)	
	D303	8-719-074-47	DIODE CRS02(TE85L)	
	D304	8-719-074-47	DIODE CRS02(TE85L)	
	D305	8-719-074-47	DIODE CRS02(TE85L)	
	D306	8-719-074-47	DIODE CRS02(TE85L)	
	D307	8-719-074-47	DIODE CRS02(TE85L)	
	D308	8-719-074-47	DIODE CRS02(TE85L)	
	D309	8-719-801-78	DIODE 1SS184	
	D311	8-719-988-61	DIODE 1SS355TE-17	
	D401	8-719-049-38	DIODE 1N5404TU	
	D404	8-719-977-12	DIODE DTZ6.8B	
	D405	8-719-053-18	DIODE 1SR154-400TE-25	
	D406	8-719-053-18	DIODE 1SR154-400TE-25	
	D407	8-719-988-61	DIODE 1SS355TE-17	
	D501	8-719-988-61	DIODE 1SS355TE-17 (AEP,UK,E)	
	D502	8-719-988-61	DIODE 1SS355TE-17	
	D503	8-719-988-61	DIODE 1SS355TE-17	
	D504	8-719-422-41	DIODE MA8051-L-TX	
	D505	8-719-988-61	DIODE 1SS355TE-17	
	D506	8-719-988-61	DIODE 1SS355TE-17	
	D507	8-719-801-78	DIODE 1SS184	
	D508	8-719-988-61	DIODE 1SS355TE-17	
	D509	8-719-988-61	DIODE 1SS355TE-17	
	D510	8-719-988-61	DIODE 1SS355TE-17	
	D511	8-719-988-61	DIODE 1SS355TE-17	

MAIN

Ref. No.	Part No.	Description	Remark
D602	8-719-017-95	DIODE MA8180-TX	
D603	8-719-422-64	DIODE MA8062-M	
D604	8-719-017-95	DIODE MA8180-TX	
D605	8-719-420-51	DIODE MA729	
D606	8-719-988-61	DIODE 1SS355TE-17	
D607	8-719-017-95	DIODE MA8180-TX	
D608	8-719-988-61	DIODE 1SS355TE-17	
D609	8-719-801-78	DIODE 1SS184	
D610	8-719-977-12	DIODE KDZ6.8V (AEP,UK,E)	
D611	8-719-977-12	DIODE KDZ6.8V (AEP,UK,E)	
D612	8-719-988-61	DIODE 1SS355TE-17	
D650	8-719-081-98	DIODE MM3Z6V8T1	
D651	8-719-801-78	DIODE 1SS184	
D652	8-719-820-05	DIODE 1SS181	
D801	8-719-977-12	DIODE DTZ6.8B	
D802	8-719-078-81	DIODE DF5A6.8FU(TE85R)	
D803	8-719-988-61	DIODE 1SS355TE-17	
D804	8-719-423-32	DIODE MA8120-M	
D805	8-719-078-81	DIODE DF5A6.8FU(TE85R)	
D806	8-719-078-81	DIODE DF5A6.8FU(TE85R)	
D807	8-719-988-61	DIODE 1SS355TE-17	
		< FERRITE BEAD >	
FB706	1-414-760-21	FERRITE, EMI (SMD)	
FB707	1-414-760-21	FERRITE, EMI (SMD)	
		< IC >	
IC101	8-759-990-43	IC TL1451ACDB-E20	
IC102	8-759-836-78	IC RN5VD53AA-TL	
IC201	8-759-909-71	IC BA4558F-T1 (AEP,UK,E)	
IC202	8-759-492-59	IC SAA6588T/V2-118 (AEP,UK,E)	
IC301	8-759-422-21	IC NJM4580V(TE2)	
IC302	8-759-422-21	IC NJM4580V(TE2)	
IC303	8-759-422-21	IC NJM4580V(TE2) (M670:US)	
IC304	8-759-422-21	IC NJM4580V(TE2) (M670:US)	
IC305	8-759-827-13	IC TDA7406T	
IC306	8-759-363-28	IC TC7660SEOA713 (M670:US)	
IC307	8-759-422-21	IC NJM4580V(TE2) (M670:US)	
IC308	8-759-422-21	IC NJM4580V(TE2) (M670:US)	
IC309	8-759-660-96	IC TDA7560 (M670:US)	
IC309	8-759-827-14	IC TA8268AH (EXCEPT M670:US)	
IC310	8-759-422-21	IC NJM4580V(TE2)	
IC501	6-700-182-01	IC MB90574BPMT-G-321-BND (US)	
IC501	6-700-183-01	IC MB90574BPMT-G-322-BND (AEP,UK,E)	
IC502	8-759-828-22	IC XC61CN4102MR	
IC601	8-759-449-89	IC BA8270F-E2	
IC650	8-759-337-40	IC NJM2904V(TE2)	
IC651	8-759-580-33	IC BA6288FS-E2	
IC652	8-759-668-14	IC PQ09DZ1U	
IC701	8-759-277-63	IC TC7W14FU(TE12R)	
IC702	6-700-210-01	IC HD6432355A36F	
IC801	8-759-830-17	IC RRX9000-0401R#01	

Ref. No.	Part No.	Description	Remark
		< JACK >	
J651	1-566-822-41	JACK (REMOTE IN) (AEP,UK,E)	
		< COIL >	
L101	1-419-506-11	INDUCTOR 150uH	
L102	1-414-392-41	INDUCTOR 1uH	
L103	1-419-506-11	INDUCTOR 150uH	
L104	1-414-394-41	INDUCTOR 2.2uH	
L105	1-414-394-41	INDUCTOR 2.2uH	
L201	1-216-295-11	SHORT 0	
L401	1-419-476-31	COIL, CHOKE 250uH	
L501	1-414-185-51	INDUCTOR 22uH	
L701	1-414-856-51	INDUCTOR 10uH	
		< TRANSISTOR >	
Q101	8-729-038-68	TRANSISTOR KRC103S	
Q102	8-729-038-55	TRANSISTOR KRA103S	
Q103	8-729-820-46	TRANSISTOR 2SB1202FAS	
Q105	8-729-034-49	TRANSISTOR KRC104S	
Q106	8-729-820-46	TRANSISTOR 2SB1202FAS	
Q107	8-729-038-68	TRANSISTOR KRC103S	
Q108	8-729-106-60	TRANSISTOR 2SB1115A-YQ	
Q109	8-729-106-60	TRANSISTOR 2SB1115A-YQ	
Q110	8-729-106-60	TRANSISTOR 2SB1115A-YQ	
Q111	8-729-038-68	TRANSISTOR KRC103S	
Q112	8-729-038-68	TRANSISTOR KRC103S	
Q113	8-729-040-17	TRANSISTOR 2SD2164-K	
Q114	8-729-106-60	TRANSISTOR 2SB1115A-YQ	
Q115	8-729-038-67	TRANSISTOR KRC102S	
Q116	8-729-034-49	TRANSISTOR KRC104S	
Q117	8-729-038-67	TRANSISTOR KRC102S	
Q118	8-759-068-54	IC WS57C291B-RE20A	
Q119	8-729-019-00	TRANSISTOR 2SD2394-G	
Q201	8-729-920-85	TRANSISTOR 2SD1664-QR	
Q202	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R (AEP,UK,E)	
Q203	8-729-038-67	TRANSISTOR KRC102S (AEP,UK,E)	
Q301	8-729-021-95	TRANSISTOR RN1441-A(TE85L) (M670:US)	
Q301	8-729-920-21	TRANSISTOR DTC314TKH04 (AEP,UK,E)	
Q302	8-729-021-95	TRANSISTOR RN1441-A(TE85L) (M670:US)	
Q302	8-729-920-21	TRANSISTOR DTC314TKH04 (AEP,UK,E)	
Q303	8-729-021-95	TRANSISTOR RN1441-A(TE85L) (M670:US)	
Q303	8-729-920-21	TRANSISTOR DTC314TKH04 (AEP,UK,E)	
Q304	8-729-021-95	TRANSISTOR RN1441-A(TE85L) (M670:US)	
Q304	8-729-920-21	TRANSISTOR DTC314TKH04 (AEP,UK,E)	
Q305	8-729-021-95	TRANSISTOR RN1441-A(TE85L) (M670:US)	
Q305	8-729-920-21	TRANSISTOR DTC314TKH04 (AEP,UK,E)	
Q306	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R (M670:US)	
Q307	8-729-106-60	TRANSISTOR 2SB1132-T100-R (M670:US)	
Q308	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R (M670:US)	
Q309	8-729-144-85	FET 2SK1133	
Q310	8-729-038-56	TRANSISTOR KRA104S	
Q312	8-729-034-49	TRANSISTOR KRC104S	

Ref. No.	Part No.	Description				Remark
Q401	8-729-049-13	TRANSISTOR	UPA1853GR-9JG-E1			
Q402	8-729-038-68	TRANSISTOR	KRC103S			
Q404	8-729-038-68	TRANSISTOR	KRC103S			
Q405	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q406	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q407	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q501	8-759-068-54	IC	WS57C291B-RE20A			
Q502	8-729-038-67	TRANSISTOR	KRC102S			
Q602	8-729-038-56	TRANSISTOR	KRA104S			
Q603	8-729-038-67	TRANSISTOR	KRC102S			
Q650	8-729-038-68	TRANSISTOR	KRC103S			
Q651	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q652	8-729-216-22	TRANSISTOR	2SA1162-G			
		< RESISTOR >				
R51	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R101	1-216-809-11	METAL CHIP	100	5%	1/16W	
R102	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R103	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R104	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R105	1-216-809-11	METAL CHIP	100	5%	1/16W	
R106	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R107	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R108	1-218-861-11	METAL CHIP	3.9K	0.5%	1/16W	
R109	1-218-847-11	METAL CHIP	1K	0.5%	1/16W	
R110	1-218-873-11	METAL CHIP	12K	0.5%	1/16W	
R111	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R112	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R113	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R114	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R115	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R116	1-218-897-11	METAL CHIP	120K	0.5%	1/16W	
R117	1-216-864-11	SHORT	0			
R118	1-216-809-11	METAL CHIP	100	5%	1/16W	
R119	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R120	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R121	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R122	1-216-809-11	METAL CHIP	100	5%	1/16W	
R123	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R124	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R125	1-218-847-11	METAL CHIP	1K	0.5%	1/16W	
R126	1-218-866-11	METAL CHIP	6.2K	0.5%	1/16W	
R127	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R128	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R129	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R130	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R131	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R132	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R133	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R134	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R135	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R136	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R137	1-216-841-11	METAL CHIP	47K	5%	1/16W	

Ref. No.	Part No.	Description			Remark
R138	1-216-821-11	METAL CHIP	1K	5%	1/16W
R139	1-216-864-11	SHORT	0		
R140	1-216-864-11	SHORT	0		
R141	1-216-845-11	METAL CHIP	100K	5%	1/16W
R201	1-216-001-00	METAL CHIP	10	5%	1/10W
R202	1-216-864-11	SHORT	0		
R203	1-216-864-11	SHORT	0		
R204	1-216-817-11	METAL CHIP	470	5%	1/16W
R205	1-216-833-11	METAL CHIP	10K	5%	1/16W (AEP,UK,E)
R206	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (AEP,UK,E)
R207	1-216-809-11	METAL CHIP	100	5%	1/16W (AEP,UK,E)
R208	1-216-845-11	METAL CHIP	100K	5%	1/16W (AEP,UK,E)
R209	1-216-295-11	SHORT	0		(AEP,UK,E)
R210	1-216-833-11	METAL CHIP	10K	5%	1/16W (AEP,UK,E)
R211	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (AEP,UK,E)
R212	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (AEP,UK,E)
R213	1-216-857-11	METAL CHIP	1M	5%	1/16W (AEP,UK,E)
R214	1-216-809-11	METAL CHIP	100	5%	1/16W (AEP,UK,E)
R215	1-216-853-11	METAL CHIP	470K	5%	1/16W (AEP,UK,E)
R216	1-216-817-11	METAL CHIP	470	5%	1/16W (AEP,UK,E)
R217	1-216-797-11	METAL CHIP	10	5%	1/16W (AEP,UK,E)
R218	1-216-823-11	METAL CHIP	1.5K	5%	1/16W (AEP,UK,E)
R219	1-216-821-11	METAL CHIP	1K	5%	1/16W (AEP,UK,E)
R220	1-216-797-11	METAL CHIP	10	5%	1/16W (AEP,UK,E)
R221	1-216-864-11	SHORT	0		
R222	1-216-864-11	SHORT	0		
R301	1-216-821-11	METAL CHIP	1K	5%	1/16W
R302	1-216-833-11	METAL CHIP	10K	5%	1/16W
R303	1-216-864-11	SHORT	0		(EXCEPTM670:US)
R304	1-216-833-11	METAL CHIP	10K	5%	1/16W
R305	1-216-864-11	SHORT	0		
R306	1-216-864-11	SHORT	0		
R307	1-216-833-11	METAL CHIP	10K	5%	1/16W
R308	1-216-833-11	METAL CHIP	10K	5%	1/16W
R309	1-216-833-11	METAL CHIP	10K	5%	1/16W
R310	1-216-833-11	METAL CHIP	10K	5%	1/16W
R311	1-216-864-11	SHORT	0		(EXCEPTM670:US)
R312	1-216-821-11	METAL CHIP	1K	5%	1/16W
R313	1-216-833-11	METAL CHIP	10K	5%	1/16W
R314	1-216-809-11	METAL CHIP	100	5%	1/16W (EXCEPT M670:US)

MAIN

Ref. No.	Part No.	Description				Remark
R314	1-216-813-11	METAL CHIP	220	5%	1/16W	(M670:US)
R316	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R317	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R318	1-216-845-11	METAL CHIP	100K	5%	1/16W	(M670:US)
R319	1-216-837-11	METAL CHIP	22K	5%	1/16W	(M670:US)
R320	1-216-845-11	METAL CHIP	100K	5%	1/16W	(M670:US)
R321	1-216-841-11	METAL CHIP	47K	5%	1/16W	(M670:US)
R322	1-216-837-11	METAL CHIP	22K	5%	1/16W	(M670:US)
R323	1-216-841-11	METAL CHIP	47K	5%	1/16W	(M670:US)
R324	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R325	1-216-809-11	METAL CHIP	100	5%	1/16W	(EXCEPT M670:US)
R325	1-216-813-11	METAL CHIP	220	5%	1/16W	(M670:US)
R326	1-216-809-11	METAL CHIP	100	5%	1/16W	(EXCEPT M670:US)
R326	1-216-813-11	METAL CHIP	220	5%	1/16W	(M670:US)
R327	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R329	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R330	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R331	1-216-841-11	METAL CHIP	47K	5%	1/16W	(M670:US)
R332	1-216-841-11	METAL CHIP	47K	5%	1/16W	(M670:US)
R333	1-216-845-11	METAL CHIP	100K	5%	1/16W	(M670:US)
R334	1-216-837-11	METAL CHIP	22K	5%	1/16W	(M670:US)
R335	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R336	1-216-845-11	METAL CHIP	100K	5%	1/16W	(M670:US)
R337	1-216-837-11	METAL CHIP	22K	5%	1/16W	(M670:US)
R338	1-216-809-11	METAL CHIP	100	5%	1/16W	(EXCEPT M670:US)
R338	1-216-813-11	METAL CHIP	220	5%	1/16W	(M670:US)
R339	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R340	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R341	1-216-809-11	METAL CHIP	100	5%	1/16W	(EXCEPT M670:US)
R341	1-216-813-11	METAL CHIP	220	5%	1/16W	(M670:US)
R342	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R343	1-216-864-11	SHORT	0			(EXCEPTM670:US)
R344	1-216-864-11	SHORT	0			(EXCEPT M670:US)
R345	1-216-864-11	SHORT	0			
R346	1-216-864-11	SHORT	0			(EXCEPT M670:US)
R347	1-216-864-11	SHORT	0			(EXCEPT M670:US)
R348	1-216-864-11	SHORT	0			(EXCEPT M670:US)
R349	1-216-864-11	SHORT	0			(EXCEPT M670:US)
R350	1-216-833-11	METAL CHIP	10K	5%	1/16W	(M670:US)
R351	1-216-833-11	METAL CHIP	10K	5%	1/16W	(M670:US)
R352	1-216-835-11	METAL CHIP	15K	5%	1/16W	(M670:US)
R353	1-216-822-11	METAL CHIP	1.2K	5%	1/16W	(M670:US)
R354	1-216-821-11	METAL CHIP	1K	5%	1/16W	(M670:US)
R355	1-216-835-11	METAL CHIP	15K	5%	1/16W	(M670:US)
R356	1-216-813-11	METAL CHIP	220	5%	1/16W	
R357	1-216-813-11	METAL CHIP	220	5%	1/16W	
R358	1-216-813-11	METAL CHIP	220	5%	1/16W	
R359	1-216-817-11	METAL CHIP	470	5%	1/16W	(M670:US)
R360	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	
R361	1-216-813-11	METAL CHIP	220	5%	1/16W	
R362	1-216-821-11	METAL CHIP	1K	5%	1/16W	(M670:US)
R363	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R364	1-216-813-11	METAL CHIP	220	5%	1/16W	
R365	1-216-833-11	METAL CHIP	10K	5%	1/16W	(M670:US)
R366	1-216-821-11	METAL CHIP	1K	5%	1/16W	(M670:US)
R367	1-216-821-11	METAL CHIP	1K	5%	1/16W	(M670:US)
R368	1-216-835-11	METAL CHIP	15K	5%	1/16W	(M670:US)
R369	1-216-835-11	METAL CHIP	15K	5%	1/16W	(M670:US)
R370	1-216-833-11	METAL CHIP	10K	5%	1/16W	(M670:US)
R371	1-216-833-11	METAL CHIP	10K	5%	1/16W	(M670:US)
R372	1-216-864-11	SHORT	0			
R373	1-216-864-11	SHORT	0			
R374	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R375	1-216-864-11	SHORT	0			(US)
R376	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R377	1-216-864-11	SHORT	0			
R379	1-216-805-11	METAL CHIP	47	5%	1/16W	
R380	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R382	1-216-817-11	METAL CHIP	470	5%	1/16W	
R383	1-216-295-11	SHORT	0			(M670:US)
R384	1-216-845-11	METAL CHIP	100K	5%	1/16W	(M670:US)
R385	1-216-845-11	METAL CHIP	100K	5%	1/16W	(M670:US)
R388	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	(M670:US)

Ref. No.	Part No.	Description				Remark
R389	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	(M670:US)
R389	1-216-864-11	SHORT	0			(EXCEPT M670:US)
R390	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R391	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R393	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R395	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R397	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R399	1-216-845-11	METAL CHIP	100K	5%	1/16W	(M670:US)
R400	1-216-845-11	METAL CHIP	100K	5%	1/16W	(M670:US)
R401	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R402	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R403	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R404	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R405	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R406	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R409	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R410	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R411	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R412	1-216-841-11	METAL CHIP	47K	5%	1/16W	(M670:US)
R413	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R414	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R415	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R416	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R417	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R418	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R419	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R420	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R421	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R422	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R423	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R424	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R425	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R451	1-216-295-11	SHORT	0			
R452	1-216-017-11	RES-CHIP	47	5%	1/10W	
R453	1-216-295-11	SHORT	0			
R455	1-216-001-00	METAL CHIP	10	5%	1/10W	
R456	1-216-295-11	SHORT	0			
R457	1-216-864-11	SHORT	0			
R500	1-216-864-11	SHORT	0			(AEP,UK,E)
R501	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R502	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R503	1-216-864-11	SHORT	0			
R504	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R505	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R506	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R507	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R508	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R509	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R510	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R511	1-216-864-11	SHORT	0			
R512	1-216-815-11	METAL CHIP	330	5%	1/16W	
R513	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R514	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R515	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R516	1-216-864-11	SHORT	0			
R517	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R518	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R519	1-216-813-11	METAL CHIP	220	5%	1/16W	
R520	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R521	1-216-864-11	SHORT	0			
R522	1-216-864-11	SHORT	0			
R523	1-216-864-11	SHORT	0			
R524	1-216-864-11	SHORT	0			
R526	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R527	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	
R528	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R529	1-216-845-11	METAL CHIP	100K	5%	1/16W	(EXCEPT M670:US)
R530	1-216-864-91	SHORT	0			(M670:US)
R535	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R536	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R537	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R538	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R539	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R540	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R541	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R542	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R543	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R544	1-216-853-11	METAL CHIP	470K	5%	1/16W	
R545	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R546	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R547	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R548	1-216-864-11	SHORT	0			
R549	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R550	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R551	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R552	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R553	1-216-817-11	METAL CHIP	470	5%	1/16W	
R601	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R602	1-216-809-11	METAL CHIP	100	5%	1/16W	
R603	1-216-809-11	METAL CHIP	100	5%	1/16W	
R604	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R605	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R606	1-216-809-11	METAL CHIP	100	5%	1/16W	(AEP,UK,E)
R607	1-216-809-11	METAL CHIP	100	5%	1/16W	(AEP,UK,E)
R608	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	
R650	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R651	1-216-836-11	METAL CHIP	18K	5%	1/16W	
R652	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R653	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R654	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	

MAIN **SERVO**

Ref. No.	Part No.	Description			Remark
R655	1-216-837-11	METAL CHIP	22K	5%	1/16W
R656	1-216-304-11	METAL CHIP	3.3	5%	1/10W
R657	1-216-839-11	METAL CHIP	33K	5%	1/16W
R658	1-216-304-11	METAL CHIP	3.3	5%	1/10W
R659	1-216-304-11	METAL CHIP	3.3	5%	1/10W
R660	1-216-809-11	METAL CHIP	100	5%	1/16W
R661	1-216-809-11	METAL CHIP	100	5%	1/16W
R662	1-216-304-11	METAL CHIP	3.3	5%	1/10W
R701	1-216-821-11	METAL CHIP	1K	5%	1/16W
R702	1-216-821-11	METAL CHIP	1K	5%	1/16W
R703	1-216-821-11	METAL CHIP	1K	5%	1/16W
R704	1-216-821-11	METAL CHIP	1K	5%	1/16W
R705	1-216-821-11	METAL CHIP	1K	5%	1/16W
R708	1-216-821-11	METAL CHIP	1K	5%	1/16W
R709	1-216-864-11	SHORT	0		
R711	1-216-864-11	SHORT	0		
R712	1-216-845-11	METAL CHIP	100K	5%	1/16W
R713	1-216-864-11	SHORT	0		
R714	1-216-821-11	METAL CHIP	1K	5%	1/16W
R715	1-216-864-11	SHORT	0		
R716	1-216-821-11	METAL CHIP	1K	5%	1/16W
R717	1-216-845-11	METAL CHIP	100K	5%	1/16W
R718	1-216-845-11	METAL CHIP	100K	5%	1/16W
R719	1-216-845-11	METAL CHIP	100K	5%	1/16W
R722	1-216-845-11	METAL CHIP	100K	5%	1/16W
R723	1-216-845-11	METAL CHIP	100K	5%	1/16W
R724	1-216-845-11	METAL CHIP	100K	5%	1/16W
R725	1-216-845-11	METAL CHIP	100K	5%	1/16W
R726	1-216-833-11	METAL CHIP	10K	5%	1/16W
R727	1-216-845-11	METAL CHIP	100K	5%	1/16W
R801	1-216-821-11	METAL CHIP	1K	5%	1/16W
R802	1-216-821-11	METAL CHIP	1K	5%	1/16W
R803	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R804	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R805	1-216-845-11	METAL CHIP	100K	5%	1/16W
R806	1-216-821-11	METAL CHIP	1K	5%	1/16W
R807	1-216-809-11	METAL CHIP	100	5%	1/16W
R808	1-216-809-11	METAL CHIP	100	5%	1/16W
R809	1-216-821-11	METAL CHIP	1K	5%	1/16W
R810	1-216-821-11	METAL CHIP	1K	5%	1/16W
R811	1-216-821-11	METAL CHIP	1K	5%	1/16W
R812	1-216-821-11	METAL CHIP	1K	5%	1/16W
R813	1-216-821-11	METAL CHIP	1K	5%	1/16W
R814	1-216-817-11	METAL CHIP	470	5%	1/16W
R815	1-216-845-11	METAL CHIP	100K	5%	1/16W
R816	1-216-813-11	METAL CHIP	220	5%	1/16W
R817	1-216-821-11	METAL CHIP	1K	5%	1/16W
R818	1-216-841-11	METAL CHIP	47K	5%	1/16W
R819	1-216-845-11	METAL CHIP	100K	5%	1/16W
R820	1-216-845-11	METAL CHIP	100K	5%	1/16W
R821	1-216-845-11	METAL CHIP	100K	5%	1/16W
R822	1-216-845-11	METAL CHIP	100K	5%	1/16W
R823	1-216-821-11	METAL CHIP	1K	5%	1/16W
R824	1-216-817-11	METAL CHIP	470	5%	1/16W
R825	1-216-857-11	METAL CHIP	1M	5%	1/16W
R827	1-216-845-11	METAL CHIP	100K	5%	1/16W
R828	1-216-821-11	METAL CHIP	1K	5%	1/16W
R830	1-216-845-11	METAL CHIP	100K	5%	1/16W
		< THERMISTOR (POSITIVE) >			
TH101	1-810-940-11	THERMISTOR, POSITIVE			
TH102	1-810-940-11	THERMISTOR, POSITIVE			
TH601	1-801-792-21	THERMISTOR, POSITIVE			
		< TUNER >			
TUX201	A-3220-813-A	TUNER UNIT (TUX-020)			
		< VIBRATOR >			
X201	1-579-900-21	VIBRATOR, CRYSTAL (4.332MHz) (AEP,UK,E)			
X501	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
X503	1-767-993-31	VIBRATOR, CRYSTAL (3.68MHz)			
X701	1-781-822-21	VIBRATOR, CERAMIC (18.432MHz)			
X801	1-781-282-11	VIBRATOR, CERAMIC (4MHz)			

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Ref. No.	Part No.	Description			Remark
*	A-3294-809-A	SERVO BOARD, COMPLETE			
		**********************			
		< CAPACITOR >			
C101	1-115-156-11	CERAMIC CHIP	1uF		10V
C103	1-104-609-11	ELECT CHIP	100uF	20%	4V
C104	1-115-156-11	CERAMIC CHIP	1uF		10V
C106	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C107	1-115-156-11	CERAMIC CHIP	1uF		10V
C108	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C109	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C115	1-164-733-11	CERAMIC CHIP	820PF	10%	50V
C116	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C117	1-164-733-11	CERAMIC CHIP	820PF	10%	50V
C118	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C127	1-104-851-11	ELECT CHIP	10uF	10%	10V
C301	1-126-393-11	ELECT CHIP	33uF	20%	10V
C302	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C303	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C304	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C305	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C306	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C307	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C308	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C309	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C310	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C311	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C502	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C504	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C505	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C506	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C507	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

Ref. No.	Part No.	Description			Remark
C508	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C509	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C510	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C511	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C512	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C513	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C515	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C516	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C517	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C518	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C519	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C520	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C521	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C522	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C550	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C553	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C554	1-164-360-11	CERAMIC CHIP	0.1uF		16V
		< CONNECTOR >			
CN1	1-764-616-12	HOUSING, CONNECTOR (PC BOARD) 30P			
CN2	1-794-153-21	CONNECTOR, FPC (ZIF) 16P			
CN3	1-770-347-21	CONNECTOR, FPC 6P			
		< FERRITE BEAD >			
FB101	1-469-710-21	INDUCTOR, FERRITE BEAD			
FB102	1-469-710-21	INDUCTOR, FERRITE BEAD			
FB503	1-469-730-11	INDUCTOR, FERRITE BEAD			
		< IC >			
IC1	8-752-095-36	IC CXA2596M-T6			
IC5	8-752-920-24	IC CXP84640-081Q			
IC7	8-759-832-99	IC LA6576L-TE-L			
IC501	8-752-392-04	IC CXD2598Q			
		< JUMPER RESISTOR >			
JR501	1-216-864-11	SHORT	0		
JR505	1-216-864-11	SHORT	0		
JR506	1-216-864-11	SHORT	0		
		< TRANSISTOR >			
Q101	8-729-904-87	TRANSISTOR 2SB1197K-T-146-R			
		< RESISTOR >			
R101	1-216-847-11	METAL CHIP	150K	5%	1/16W
R102	1-216-847-11	METAL CHIP	150K	5%	1/16W
R103	1-216-801-11	METAL CHIP	22	5%	1/16W
R104	1-216-857-11	METAL CHIP	1M	5%	1/16W
R105	1-216-833-11	METAL CHIP	10K	5%	1/16W
R106	1-216-857-11	METAL CHIP	1M	5%	1/16W
R107	1-216-835-11	METAL CHIP	15K	5%	1/16W
R108	1-216-838-11	METAL CHIP	27K	5%	1/16W
R109	1-216-801-11	METAL CHIP	22	5%	1/16W
R110	1-216-843-11	METAL CHIP	68K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R111	1-216-842-11	METAL CHIP	56K	5%	1/16W
R113	1-216-839-11	METAL CHIP	33K	5%	1/16W
R122	1-216-845-11	METAL CHIP	100K	5%	1/16W
R123	1-216-839-11	METAL CHIP	33K	5%	1/16W
R127	1-216-821-11	METAL CHIP	1K	5%	1/16W
R213	1-216-821-11	METAL CHIP	1K	5%	1/16W
R301	1-216-839-11	METAL CHIP	33K	5%	1/16W
R302	1-216-839-11	METAL CHIP	33K	5%	1/16W
R303	1-216-821-11	METAL CHIP	1K	5%	1/16W
R304	1-216-839-11	METAL CHIP	33K	5%	1/16W
R306	1-216-833-11	METAL CHIP	10K	5%	1/16W
R307	1-216-833-11	METAL CHIP	10K	5%	1/16W
R308	1-216-833-11	METAL CHIP	10K	5%	1/16W
R309	1-216-833-11	METAL CHIP	10K	5%	1/16W
R310	1-216-833-11	METAL CHIP	10K	5%	1/16W
R311	1-216-833-11	METAL CHIP	10K	5%	1/16W
R312	1-216-845-11	METAL CHIP	100K	5%	1/16W
R313	1-216-842-11	METAL CHIP	56K	5%	1/16W
R314	1-216-842-11	METAL CHIP	56K	5%	1/16W
R315	1-216-842-11	METAL CHIP	56K	5%	1/16W
R316	1-216-842-11	METAL CHIP	56K	5%	1/16W
R317	1-216-838-11	METAL CHIP	27K	5%	1/16W
R318	1-216-840-11	METAL CHIP	39K	5%	1/16W
R319	1-216-840-11	METAL CHIP	39K	5%	1/16W
R320	1-216-833-11	METAL CHIP	10K	5%	1/16W
R321	1-216-846-11	METAL CHIP	120K	5%	1/16W
R322	1-216-835-11	METAL CHIP	15K	5%	1/16W
R501	1-216-833-11	METAL CHIP	10K	5%	1/16W
R503	1-216-845-11	METAL CHIP	100K	5%	1/16W
R504	1-216-857-11	METAL CHIP	1M	5%	1/16W
R505	1-216-839-11	METAL CHIP	33K	5%	1/16W
R506	1-216-845-11	METAL CHIP	100K	5%	1/16W
R507	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R511	1-216-845-11	METAL CHIP	100K	5%	1/16W
R513	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R516	1-216-845-11	METAL CHIP	100K	5%	1/16W
R517	1-216-837-11	METAL CHIP	22K	5%	1/16W
R518	1-216-834-11	METAL CHIP	12K	5%	1/16W
R519	1-216-834-11	METAL CHIP	12K	5%	1/16W
R520	1-216-834-11	METAL CHIP	12K	5%	1/16W
R521	1-216-834-11	METAL CHIP	12K	5%	1/16W
R522	1-216-834-11	METAL CHIP	12K	5%	1/16W
R523	1-216-834-11	METAL CHIP	12K	5%	1/16W
R524	1-216-845-11	METAL CHIP	100K	5%	1/16W
R526	1-216-845-11	METAL CHIP	100K	5%	1/16W
R527	1-216-845-11	METAL CHIP	100K	5%	1/16W
R531	1-216-809-11	METAL CHIP	100	5%	1/16W
R532	1-216-845-11	METAL CHIP	100K	5%	1/16W
R533	1-216-845-11	METAL CHIP	100K	5%	1/16W
R535	1-216-845-11	METAL CHIP	100K	5%	1/16W
R551	1-216-841-11	METAL CHIP	47K	5%	1/16W
R552	1-216-841-11	METAL CHIP	47K	5%	1/16W
R553	1-216-845-11	METAL CHIP	100K	5%	1/16W

SERVO **SUB (CD)** **SW**

Ref. No.	Part No.	Description			Remark
R554	1-216-845-11	METAL CHIP	100K	5%	1/16W
R555	1-216-845-11	METAL CHIP	100K	5%	1/16W
R558	1-216-864-11	SHORT	0		
R560	1-216-809-11	METAL CHIP	100	5%	1/16W
R563	1-216-809-11	METAL CHIP	100	5%	1/16W
R564	1-216-845-11	METAL CHIP	100K	5%	1/16W
R568	1-216-837-11	METAL CHIP	22K	5%	1/16W
R569	1-216-809-11	METAL CHIP	100	5%	1/16W
R570	1-216-821-11	METAL CHIP	1K	5%	1/16W
R572	1-216-809-11	METAL CHIP	100	5%	1/16W
R590	1-216-845-11	METAL CHIP	100K	5%	1/16W
R594	1-216-845-11	METAL CHIP	100K	5%	1/16W
R595	1-216-845-11	METAL CHIP	100K	5%	1/16W
R599	1-216-821-11	METAL CHIP	1K	5%	1/16W
		< SWITCH >			
SW1	1-762-944-12	SWITCH, DETECTION (SMALL TYPE) (DOWN)			
		< VIBRATOR >			
X1	1-781-758-21	VIBRATOR, CERAMIC (CHIP TYPE) (10MHz)			
X2	1-781-759-21	VIBRATOR, CERAMIC (CHIP TYPE) (16MHz)			

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Ref. No.	Part No.	Description			Remark
*	1-681-373-11	SUB (CD) BOARD			
		**************			
		< CAPACITOR >			
C903	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C904	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C905	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C906	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C907	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C908	1-164-388-11	CERAMIC CHIP	270PF	5%	50V
		< FLAT CABLE >			
CN901	1-783-268-11	CABLE, FLAT 11P			
		< DIODE >			
D901	8-719-988-61	DIODE 1SS355TE-17			
D902	8-719-017-95	DIODE KDZ18V			
D903	8-719-079-10	LED CL-220UB-X-TS (DISC IN)			
D906	8-719-422-41	DIODE MA8051-L-TX			
D907	8-719-977-12	DIODE MA8068-M-TX			
D908	8-719-083-14	DIODE RRX9000-0501			
		< FERRITE BEAD >			
FB903	1-500-329-21	INDUCTOR, FERRITE BEAD			
		< IC >			
IC901	8-759-830-18	IC RRX9000-0601#1			
		< TRANSISTOR >			
Q901	8-729-216-22	TRANSISTOR 2SA1037K-T-146-S			
Q902	8-729-038-67	TRANSISTOR KRC102S			
		< RESISTOR >			
R901	1-216-833-11	METAL CHIP	10K	5%	1/16W
R902	1-216-845-11	METAL CHIP	100K	5%	1/16W
R903	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R904	1-216-035-00	METAL CHIP	270	5%	1/10W
R906	1-216-811-11	METAL CHIP	150	5%	1/16W
R907	1-216-864-11	SHORT	0		
R908	1-216-850-11	METAL CHIP	270K	5%	1/16W
R909	1-216-846-11	METAL CHIP	120K	5%	1/16W
		< SWITCH >			
SW901	1-692-135-21	SWITCH, KEYBOARD (RESET)			

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Ref. No.	Part No.	Description	Remark
*	1-681-375-11	SW BOARD	
		**********	
		< SWITCH >	
SW1001	1-771-937-21	SWITCH, DETECTION (OPEN/CLOSE)	
SW1002	1-529-566-31	SWITCH, PUSH (1 KEY) (CENTER)	

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Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		***************	
2	1-776-207-72	CORD (WITH CONNECTOR) (POWER) (US)	
2	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)	(AEP,UK,E)
113	1-777-246-41	CORD (WITH CONNECTOR) (ANT)	
114	1-790-375-21	CORD (WITH CONNECTOR) (SUB OUT (MONO))	
115	1-757-775-11	CORD (WITH CONNECTOR) (AUX-IN (AUDIO))	
177	1-681-390-11	FLEXIBLE BOARD	
351	X-3378-480-1	CHASSIS (OP) ASSY (including M901)	
356	1-676-707-11	PICK-UP FLEXIBLE BOARD	
357	1-677-182-11	MOTOR FLEXIBLE BOARD	
⚠360	8-820-103-03	PICK-UP, OPTICAL KSS-720A/K1RP	
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
M601	X-3378-769-1	MOTOR ASSY (OPEN/CLOSE)	
M902	A-3301-985-A	MOTOR ASSY, SLED (SLED)	
M903	A-3315-039-A	MOTOR SUB ASSY, LO (LOADING)	

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The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

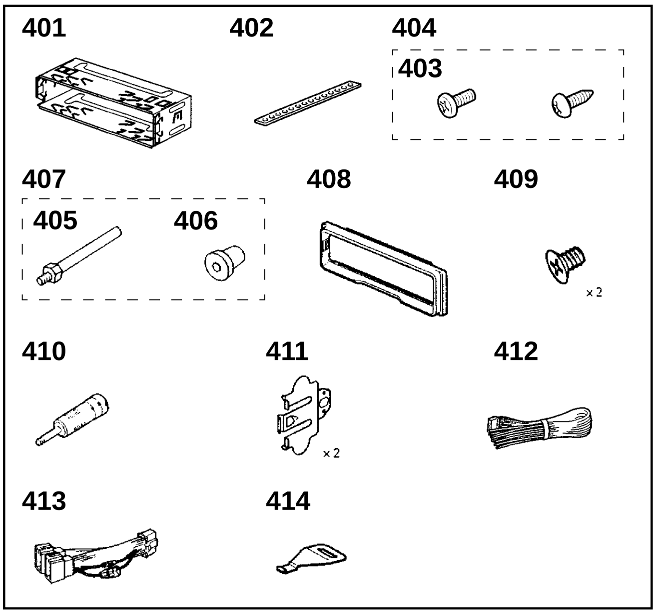
Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		********************************	
	1-476-546-11	REMOTE COMMANDER (RM-X111) (AEP,UK,E)	
	1-476-546-21	REMOTE COMMANDER (RM-X110) (US)	
	3-230-446-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH, SPANISH) (US)	
	3-230-447-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH,SPANISH) (US)	
	3-230-448-11	MANUAL, INSTRUCTION (ENGLISH,SPANISH, SWEDISH,PORTUGUESE,GREEK, RUSSIAN) (AEP,UK,E)	
	3-230-449-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, GERMAN,FRENCH,ITALIAN, DUTCH) (AEP,UK,E)	
	3-230-549-01	LID, BATTERY CASE (for RM-X110/X111)	
	X-3378-390-1	CASE ASSY (for FRONT PANEL)	

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Ref. No.	Part No.	Description	Remark
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		HARDWARE LIST	
		**************	
#1	7-685-790-09	SCREW +PTT 2.6X4 (S)	
#2	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#3	7-685-794-09	SCREW +PTT 2.6X10 (S)	
#4	7-627-553-28	SCREW, PRECISION +P 2X2.5	
#5	7-624-102-04	STOP RING 1.5, TYPE -E	
#6	7-627-552-88	SCREW, PRECISION +P 1.7X2.2	
#7	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT	
#8	7-627-553-37	SCREW, PRECISION +P 2X3 TYPE3	
#9	7-628-253-00	SCREW, SPECIAL	
#10	7-627-553-17	SCREW, PRECISION +P 2X2 TYPE3	
#11	7-627-850-28	SCREW, PRECISION +P 1.4X3	
#12	7-621-255-25	SCREW +P 2X4	

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Ref. No.	Part No.	Description	Remark
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**************************************	
401	3-014-370-21	FRAME, FITTING	
402	3-916-012-01	BRACKET (ND), FITTING ASSIST (US)	
403	7-682-160-01	SCREW +P 4X6 (US)	
404	X-3368-725-1	SCREW ASSY, FITTING (US)	
405	3-386-828-01	SCREW, FITTING (AEP,UK,E)	
406	3-349-410-01	BUSHING (AEP,UK,E)	
407	X-3366-405-1	SCREW ASSY (EXP), FITTING (AEP,UK,E)	
408	3-230-445-01	COLLAR	
409	3-934-325-01	SCREW (+K 5X8 TP)	
410	1-465-459-21	ADAPTOR, ANTENNA (AEP,UK,E)	
411	3-030-929-01	SPRING, FITTING	
412	1-776-207-72	CORD (WITH CONNECTOR) (POWER) (US)	
413	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER) (AEP,UK,E)	
414	3-231-993-01	KEY (01)	



REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2001. 03	New